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Knowledge of Contraception Among University Students in Nigeria: Evidence from Theatre Arts Undergraduates

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ABSTRACT

Contraceptive knowledge plays a central role in reproductive health decision-making among young adults. University students represent a population group that is increasingly exposed to sexual health information from diverse sources, yet knowledge of contraceptive methods often remains uneven. This study examines the level of contraceptive knowledge among undergraduate students in the Department of Theatre Arts at Nnamdi Azikiwe University in Awka, Nigeria. A descriptive cross-sectional design was employed. Data were collected from 247 students using a structured self-administered questionnaire and analysed using the Statistical Package for the Social Sciences. Results show that 78% of respondents had heard of contraception, although only 61% demonstrated clear understanding of the meaning and use. Knowledge of specific contraceptive methods varied considerably. Condoms were the most widely recognised method, reported by 42.0% of respondents, while awareness of other modern methods such as implants and intrauterine contraceptive devices was substantially lower. Mass media and peers emerged as the primary sources of contraceptive information, whereas parental communication and formal health services played limited roles. The findings highlight the persistence of gaps between awareness and comprehensive knowledge of contraception among university students. Strengthening structured reproductive health education within tertiary institutions may help improve informed decision-making among young adults.

Keywords: Contraception knowledge, university students, reproductive health education, Nigeria, contraceptive awareness

INTRODUCTION

Sexual and reproductive health continues to represent an important public health concern for young adults in many parts of the world. The transition to adulthood is often accompanied by increasing autonomy, exposure to intimate relationships, and greater involvement in sexual

activity. Access to reliable information about contraception therefore plays a crucial role in supporting safe reproductive health choices.

Contraception refers to methods or interventions designed to prevent pregnancy through the prevention of fertilisation or

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implantation. Modern contraceptive methods include barrier methods, hormonal contraceptives, intrauterine devices, implants, and surgical procedures. Effective contraceptive use contributes significantly to the prevention of unintended pregnancies and reduction of sexually transmitted infections (World Health Organization, 2025).

Young adults represent a population group with particularly important reproductive health needs. Research across several regions has shown that inadequate knowledge of contraception remains a significant barrier to effective reproductive health behaviour. When individuals lack accurate information about contraceptive methods, they may rely on ineffective fertility control practices or delay seeking appropriate reproductive health services (Iyanda et al., 2020; Ahinkorah et al., 2021; D'Souza et al., 2022).

The challenge of incomplete contraceptive knowledge is especially pronounced in many low- and middle-income countries. Sub-Saharan Africa continues to experience relatively high rates of unintended pregnancies and unsafe abortions. Studies conducted across African contexts indicate that adolescents and young adults frequently demonstrate general awareness of contraception while lacking detailed understanding of available methods and their correct application (Jonas et al., 2022; Chola et al., 2023).

Nigeria presents an important context for examining contraceptive knowledge among young adults. Despite the existence of national reproductive health policies aimed at promoting family planning, utilisation of contraceptive services remains uneven. Previous research has indicated that Nigerian youths often obtain information about contraception from informal channels such as peers and media platforms rather than from

structured reproductive health education programmes (Ayodeji et al., 2025). These information pathways may increase awareness but do not always provide accurate or comprehensive understanding of contraceptive options.

Universities represent important environments for reproductive health education. Students within tertiary institutions are exposed to diverse social networks and communication channels that influence their understanding of sexual health. Studies conducted among university populations have shown that while many students report awareness of contraception, knowledge of specific contraceptive methods may remain limited or incomplete (Bearak et al., 2020; Barian et al., 2021).

Existing research on contraceptive knowledge among university students in Nigeria has largely focused on students enrolled in health-related disciplines. These students often possess greater exposure to reproductive health education through their academic programmes. Students in other academic fields may demonstrate different patterns of knowledge and information sources.

The present study addresses this gap by examining contraceptive knowledge among undergraduate students in the Department of Theatre Arts at Nnamdi Azikiwe University in Awka, Nigeria. Theatre arts students represent a population that has received limited attention within reproductive health research. Understanding their level of contraceptive knowledge provides valuable insight into reproductive health awareness among university students outside health-related disciplines.

The study therefore seeks to answer the following research question: What level of

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knowledge about contraception exists among theatre arts students in Nnamdi Azikiwe University?

Understanding the level and sources of contraceptive knowledge among these students may inform reproductive health education initiatives aimed at improving awareness and informed decision-making within tertiary institutions.

METHODS

Study Design

This study adopted a descriptive cross-sectional research design to examine contraceptive knowledge among undergraduate students. Cross-sectional designs are widely used in public health research when the aim is to assess the distribution of knowledge, perceptions, or behaviours within a defined population at a specific point in time (Setia, 2016). The design allows researchers to obtain a snapshot of existing conditions without manipulating the study environment or introducing experimental interventions.

The approach was appropriate for the present study because the objective was to document levels of contraceptive awareness and knowledge among a defined group of university students. Cross-sectional surveys are frequently employed in reproductive health research to assess knowledge, attitudes, and practices related to contraception and sexual health (Sedgwick, 2014).

Study Setting

The study was conducted at Nnamdi Azikiwe University located in Awka, the capital city of Anambra State in south-eastern Nigeria. Awka is an urban centre situated between the cities of Enugu and Onitsha and functions as an

important administrative and educational centre in the region.

Nnamdi Azikiwe University is a public tertiary institution comprising several faculties and numerous academic departments. The university attracts students from different parts of Nigeria and provides undergraduate and postgraduate education across a wide range of disciplines.

The specific study population was drawn from the Department of Theatre Arts within the Faculty of Arts. At the time of the study, the department had approximately 375 undergraduate students distributed across four academic levels. This setting provided an opportunity to examine contraceptive knowledge among students outside health-related academic disciplines.

Study Population

The target population consisted of undergraduate students enrolled in the Department of Theatre Arts at Nnamdi Azikiwe University. Young adults in tertiary institutions represent an important population for reproductive health research because they fall within the age group where sexual activity often increases and reproductive health decisions become more prominent (Bearak et al., 2020).

Students from all four academic levels within the department were eligible to participate. Including respondents across different academic levels helped ensure that the study captured a range of experiences and exposure to contraceptive information within the department.

Inclusion and Exclusion Criteria

Participants were eligible for inclusion if they met the following criteria:

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1. They were registered undergraduate students in the Department of Theatre Arts
2. They were present during the data collection period
3. They consented voluntarily to participate in the study

Students who were absent at the time of data collection or who declined participation were excluded.

Sample Size Determination

The required sample size was determined using the standard formula for descriptive studies:

$$n = \frac{Z^2 pq}{d^2}$$

where:

n represents the desired sample size

Z represents the standard normal deviate corresponding to a 95% confidence level (1.96)

p represents the estimated proportion of the population possessing the characteristic of interest

q represents the complement of p

d represents the margin of error

This formula is commonly used for estimating sample size in cross-sectional surveys (Choudhury, Dhua & Goel, 2025).

Using an estimated prevalence of 20% and a margin of error of 5%, the calculated minimum sample size was 246 participants. To account for possible nonresponse, an additional 10% was added to the calculated sample size. This

adjustment resulted in a target sample size of approximately 271 students.

A total of 271 questionnaires were distributed. Out of these, 247 questionnaires were completed correctly and returned, resulting in a response rate of approximately 91%.

Sampling Technique

A stratified sampling technique with proportional allocation was used to select participants from the study population. Stratified sampling is frequently used in survey research when a population can be divided into distinct subgroups that need to be adequately represented in the sample (Etikan & Bala, 2017).

The total student population in the department consisted of approximately 375 students distributed across four academic levels:

1. 100 level: 122 students
2. 200 level: 96 students
3. 300 level: 73 students
4. 400 level: 84 students

Each academic level constituted a stratum. Proportional allocation was then applied to determine the number of respondents selected from each stratum relative to its share of the population.

The final sample distribution included:

1. 100 level: 82 respondents
2. 200 level: 62 respondents
3. 300 level: 49 respondents
4. 400 level: 55 respondents

This procedure ensured representation of students from all academic levels within the department.

Data Collection Instrument

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Data were collected using a semi-structured questionnaire designed for the study. Questionnaires are widely used tools in public health surveys for collecting information on knowledge, attitudes, and practices among defined populations (Kaliyaperumal, 2004).

The questionnaire was written in English and consisted of four sections aligned with the objectives of the research.

Section A collected sociodemographic information including age, sex, marital status, ethnic group, religion, and academic level.

Section B assessed respondents' knowledge of contraception. Questions examined awareness of contraception, understanding of contraceptive uses, knowledge of contraceptive methods, and sources of contraceptive information.

Sections C and D addressed attitudes toward contraception and contraceptive practices respectively. Although these sections formed part of the overall survey instrument, the present study focuses specifically on the knowledge component.

In total, the questionnaire contained twenty-one items.

Data Collection Procedure

Data collection involved the administration of self-completed questionnaires to eligible students. Participants were provided with brief instructions regarding how to complete the questionnaire and were informed about the purpose of the study.

Self-administered questionnaires are commonly used in surveys addressing sensitive topics such as sexual and reproductive health because they reduce interviewer influence and

encourage more honest responses (Sedgwick, 2014).

Completed questionnaires were collected immediately after completion to minimise loss of data.

Data Analysis

Completed questionnaires were reviewed for completeness before data entry. Data were then entered and analysed using the Statistical Package for the Social Sciences.

Descriptive statistics were used to summarise the findings. Frequencies and percentages were calculated to describe respondents' awareness of contraception, knowledge of contraceptive uses, recognition of contraceptive methods, and sources of information about contraception.

Tables and graphical illustrations were used to present the results clearly. The mean and standard deviation were calculated for relevant demographic variables.

Ethical Considerations

Ethical approval for the study was obtained from the Ethics Committee of Nnamdi Azikiwe University, Awka. Permission to conduct the research was also obtained from the Department of Theatre Arts.

Participation in the study was voluntary. Students were informed about the purpose of the research before completing the questionnaire. Respondents were assured that their participation would remain anonymous and that the information provided would be used strictly for research purposes.

Confidentiality of participants' responses was maintained throughout the study.

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RESULTS

A total of 271 questionnaires were distributed, of which 247 were completed and returned, yielding a response rate of 91%. The analysis therefore includes 247 respondents drawn from all academic levels within the Department of Theatre Arts.

The sociodemographic profile of respondents is presented in Table 1. Most participants were within the age range of 20–24 years, which represented the modal age group. Male respondents accounted for 58.7% of the sample, while 41.3% were female. The majority of respondents (92.7%) were single.

Table 1: Sociodemographic characteristics of respondents (N = 247)

Characteristic	Value
Male	58.7%
Female	41.3%
Single	92.7%
Married	7.3%

Awareness of Contraception

Overall awareness of contraception among respondents was relatively high. As shown in

Figure 1, 78% of respondents reported that they had heard of contraception, while 22% indicated no prior awareness.

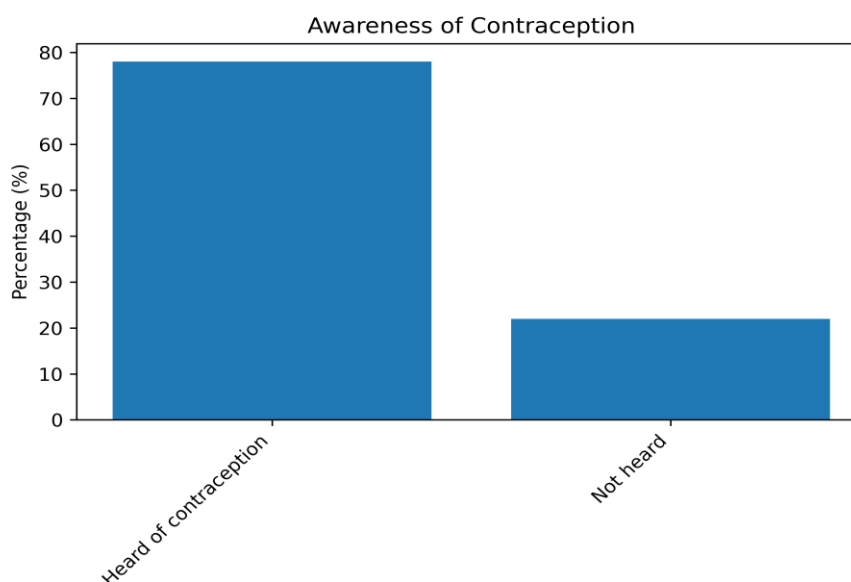


Figure 1: Awareness of contraception among respondents

Further assessment revealed differences in the depth of understanding. As illustrated in Figure 2, 61% of respondents reported clear

awareness of contraception and its uses, whereas 20% indicated partial knowledge and 19% reported little or no knowledge.

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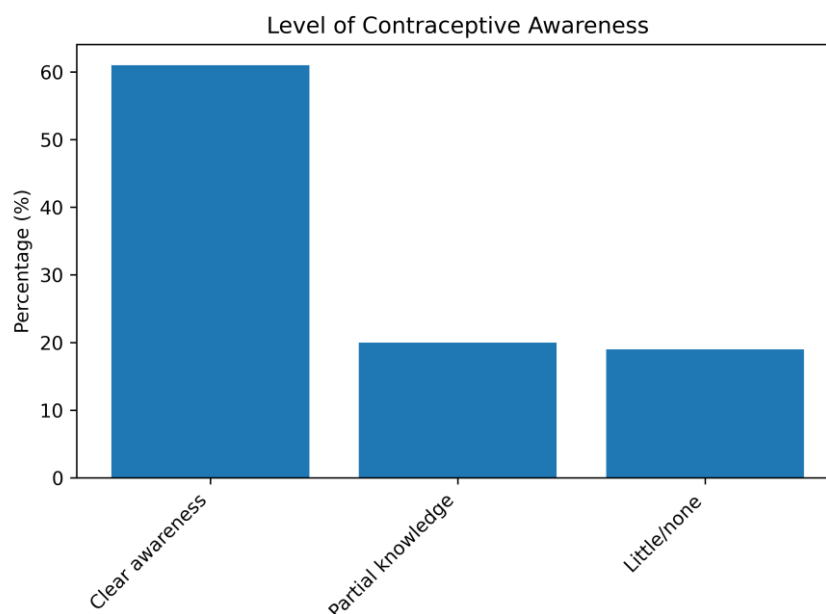


Figure 2: Level of contraceptive awareness

These findings indicate that although general awareness of contraception is widespread among students, detailed understanding remains uneven across the study population.

Knowledge of the Uses of Contraception

Respondents were asked to identify the perceived uses of contraception. The most frequently identified purpose was protection against sexually transmitted infections (47%), followed by prevention of pregnancy (43%). Smaller proportions associated contraception with treatment of menstrual disorders (7.3%) and management of infertility (6.9%).

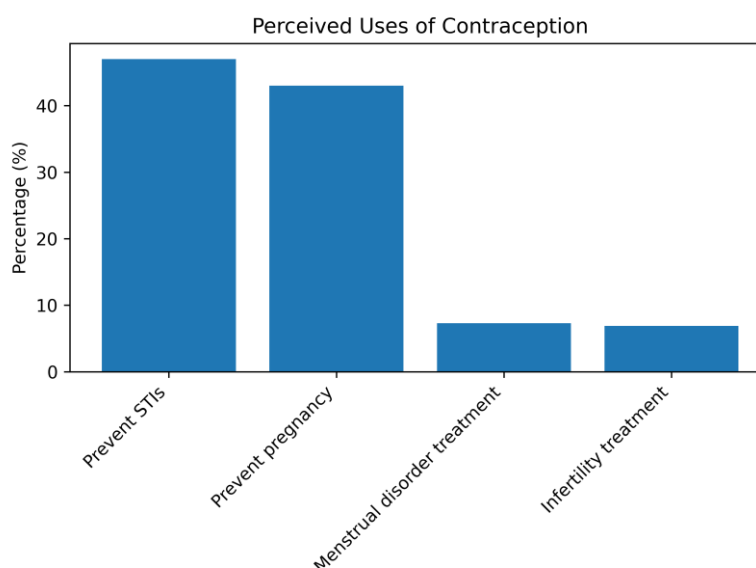


Figure 3. Perceived uses of contraception

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These findings suggest that respondents recognise both reproductive and disease prevention functions of contraceptive methods, although the emphasis appears to be slightly stronger on infection prevention.

Knowledge of Contraceptive Methods

Knowledge of specific contraceptive methods varied considerably among respondents. The distribution of recognised methods is presented in Table 2.

Condoms emerged as the most widely recognised method, identified by 42.0% of respondents. Awareness of other methods was substantially lower. Contraceptive injections were recognised by 15.6% of respondents, while 12.6% identified hormonal contraceptive pills. Knowledge of other methods was limited, including calendar methods (8.3%), implants (7.1%), intrauterine contraceptive devices (5.2%), surgical contraception (4.9%), and withdrawal methods (3.8%).

Table 2. Knowledge of contraceptive methods among respondents

Method	Percentage (%)
Condom	42.0
Contraceptive injection	15.6
Hormonal pills	12.6
Calendar method	8.3
Implants	7.1
IUCD	5.2
Surgery	4.9
Withdrawal	3.8

Note: N = 247. Percentages represent respondents recognising each method.

The distribution of responses indicates that knowledge among students is concentrated around a small number of commonly discussed contraceptive methods.

Sources of Contraceptive Information

Respondents reported several sources through which they had obtained information about

contraception. The results are summarised in Table 3.

The mass media was the most frequently cited source of contraceptive information (36.7%), followed by friends (25.6%). Other reported sources included lectures (14.0%), parents or family members (9.8%), neighbours (6.6%), and church discussions (4.9%).

Table 3. Sources of contraceptive information

Source	Percentage (%)
Mass media	36.7
Friends	25.6
Lectures	14.0
Family/parents	9.8

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Neighbours	6.6
Church	4.9
Other	2.3

Note: N = 247. Respondents reported their primary source of contraceptive knowledge.

The relatively small proportion of respondents obtaining information from parents highlights the limited role of family communication in shaping contraceptive knowledge within this population.

Summary of Key Findings

The results reveal three main patterns. First, awareness of contraception among respondents is high, although depth of understanding varies. Second, knowledge of contraceptive methods is uneven, with condoms dominating students' recognition of available methods. Third, information about contraception is obtained primarily from informal channels such as mass media and peer networks rather than from family or formal health services.

DISCUSSION

The present study examined contraceptive knowledge among undergraduate students in the Department of Theatre Arts at Nnamdi Azikiwe University in Awka, Nigeria. The findings indicate that general awareness of contraception among respondents is relatively high. However, a notable gap remains between basic awareness and comprehensive knowledge of contraceptive methods. This pattern reflects a recurring theme in reproductive health research among young adults, particularly in low- and middle-income countries.

A substantial proportion of respondents reported having heard of contraception. High levels of general awareness among university students have been reported in several studies across sub-Saharan Africa. Research suggests

that increased exposure to mass media, social networks, and digital platforms has contributed to greater visibility of reproductive health information among young adults (Olamijuwon et al., 2021; Zinke-Allmang et al., 2022; Sayo, Ngigi & Nabaneh, 2025). Nevertheless, awareness alone does not necessarily translate into accurate understanding of contraceptive options or their correct use.

The findings of this study demonstrate that although many respondents had heard of contraception, fewer displayed clear understanding of its meaning and functions. This distinction between awareness and knowledge has been widely documented in reproductive health research. For example, a multicounty analysis of adolescent contraceptive knowledge found that young people often recognise the concept of contraception while lacking detailed understanding of specific methods and their effectiveness (Chandra-Mouli et al., 2017). Inadequate knowledge may limit the ability of young adults to make informed reproductive health decisions.

Knowledge of specific contraceptive methods among respondents was uneven. Condoms emerged as the most widely recognised contraceptive method, whereas awareness of other methods such as implants and intrauterine devices remained comparatively low. This pattern aligns with findings from several studies conducted among university students in Nigeria and other African countries. Condoms tend to dominate contraceptive awareness because of their dual role in preventing both pregnancy and sexually

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transmitted infections (Beksinska et al., 2020). Public health campaigns frequently emphasise condom use for HIV and STI prevention, which may contribute to their prominence in young adults' knowledge.

Limited awareness of long-acting contraceptive methods among respondents may reflect gaps in reproductive health education. Long-acting reversible contraceptives such as implants and intrauterine devices are recognised as highly effective methods of pregnancy prevention (WHO, 2025). However, awareness and uptake of these methods among young people remain relatively low in many developing countries. Insufficient knowledge about these options may restrict the range of contraceptive choices considered by young adults.

The findings also highlight the importance of information sources in shaping contraceptive knowledge. Mass media and peer networks emerged as the most frequently reported sources of information in this study. Similar patterns have been reported in other studies examining reproductive health knowledge among university students (Olaoye & Onyenankeya, 2023; Okoye & Saewyc, 2024). Media platforms, including television, radio, and social media, play an influential role in disseminating reproductive health information to young audiences. At the same time, peer communication often functions as an important channel for discussing sensitive topics related to sexuality.

Despite the influence of these informal information channels, parental communication appeared to play a limited role in shaping contraceptive knowledge among respondents. Cultural norms in many societies discourage open discussion of sexual and reproductive health within families. As a result, young adults may rely on external sources for information that may not always be comprehensive or

accurate. Research has shown that supportive communication between parents and adolescents can improve knowledge and promote safer sexual behaviour (Agbeve et al., 2022; Agyei & Kaura, 2023).

Universities therefore represent critical environments for strengthening reproductive health education. Structured sexual and reproductive health programmes within tertiary institutions can provide students with reliable information about contraceptive methods and address misconceptions that may arise from informal information sources. Evidence suggests that comprehensive reproductive health education improves young people's knowledge and encourages safer sexual decision-making (UNFPA, 2026).

The findings of this study thus reinforce the importance of improving access to accurate contraceptive information among university students. Although awareness of contraception is widespread, gaps in detailed knowledge remain evident. Addressing these gaps through targeted educational initiatives may contribute to improved reproductive health outcomes among young adults.

IMPLICATIONS FOR POLICY AND PRACTICE

The findings of this study have several important implications for research, policy development, and practical interventions in reproductive health education among university populations. Although awareness of contraception among the respondents was relatively high, the results reveal clear gaps in detailed knowledge of contraceptive methods and in the diversity of information sources. These patterns highlight the need for more targeted strategies aimed at strengthening reproductive health literacy among young adults in tertiary institutions.

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The study highlights important policy considerations. Tertiary institutions represent a critical environment for shaping health knowledge among young adults, yet structured reproductive health education remains limited in many universities. Policymakers in the education and health sectors should consider strengthening institutional frameworks that support the delivery of accurate reproductive health information to students. Integrating sexual and reproductive health education into orientation programmes, student health services, and campus awareness initiatives could improve access to reliable information. Such efforts would help reduce dependence on informal information sources that may not always provide complete or accurate knowledge.

In terms of practice, the results underscore the importance of strengthening campus-based health promotion initiatives. University health centres and student support services could play a more active role in providing educational materials, counselling services, and outreach programmes related to contraception. Peer education programmes may also be particularly effective in university settings, given the influential role of peer networks identified in this study. When properly designed and supported, peer-led initiatives can help disseminate accurate reproductive health information while encouraging open discussion of sensitive topics among students.

Strengthening collaboration between universities and public health agencies may further enhance the effectiveness of these interventions. Partnerships with reproductive health organisations could facilitate the development of educational campaigns, workshops, and information sessions that provide students with clear and reliable knowledge about contraceptive options.

DIRECTIONS FOR FUTURE RESEARCH

While this study offers valuable insight into contraceptive knowledge within a single academic department, several avenues remain for further exploration. Future research could broaden the sample to include students from multiple faculties and institutions, enabling a more comprehensive understanding of contraceptive knowledge across diverse academic and organisational contexts.

Comparative work examining students in health-related programmes alongside those in non-health disciplines may also illuminate differences in knowledge patterns and information sources. Such findings could guide the development of targeted educational interventions tailored to the needs of specific student groups. Another important direction involves investigating how knowledge, attitudes, and actual contraceptive practices intersect. Determining whether greater knowledge leads to safer reproductive health behaviours would shed light on the effectiveness of current educational approaches.

Longitudinal studies could further clarify how contraceptive knowledge develops over the course of students' university experience and how exposure to educational initiatives shapes both understanding and behaviour. Qualitative methods, such as interviews or focus groups, would also provide richer insight into the social and cultural influences that shape students' perceptions of contraception.

These considerations align with a broader research need highlighted by the present findings: the distinction between general awareness of contraception and a deeper, more comprehensive understanding of specific methods. Although many respondents recognised the concept of contraception, their familiarity with several modern methods was

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limited. Future studies should therefore focus not only on whether students are aware of contraception but also on the depth and quality of their knowledge, and on how this knowledge shapes attitudes, decision-making, and contraceptive practices. Exploring these relationships would offer a clearer picture of how reproductive health knowledge translates into behaviour and supports the development of more effective educational strategies within higher-education settings.

CONCLUSION

This study examined the level of contraceptive knowledge among undergraduate students in the Department of Theatre Arts at Nnamdi Azikiwe University in Awka, Nigeria. The findings provide useful insights into the patterns of awareness, understanding, and information sources related to contraception among university students outside health-related academic disciplines. Overall, the results indicate that while general awareness of contraception is relatively high among respondents, significant gaps remain in the depth and breadth of knowledge regarding specific contraceptive methods.

A large proportion of respondents reported having heard about contraception, suggesting that reproductive health concepts have achieved a degree of visibility among young adults in tertiary institutions. However, the results also demonstrate that awareness does not necessarily translate into comprehensive understanding. Many respondents displayed limited familiarity with the range of contraceptive options available, with knowledge concentrated mainly around condoms. Awareness of other contraceptive methods such as implants, intrauterine devices, and hormonal options was comparatively low. This uneven distribution of knowledge highlights the continued need for improved

reproductive health education among university populations.

The findings further reveal that students obtain information about contraception primarily through informal channels such as mass media and peer networks. While these sources play an important role in disseminating information, they may not always provide detailed or accurate knowledge about contraceptive methods. The relatively limited role of family communication observed in this study suggests that many young adults may lack opportunities for structured discussion of reproductive health issues within their households.

Universities therefore represent an important setting for strengthening reproductive health education and promoting informed decision-making among young adults. Integrating comprehensive sexual and reproductive health education into university environments could help address gaps in contraceptive knowledge and reduce reliance on informal information sources. Educational initiatives that provide accurate information about a wide range of contraceptive methods may improve students' understanding of reproductive health and support safer sexual behaviour.

AUTHOR CONTRIBUTION

All authors played a substantive role in shaping this study and developing the manuscript. E.A.O. conceptualised the work and designed the overall study framework. Data analysis, interpretation of data and validation of findings were carried out collaboratively, with each author contributing to the discussions that informed the final results. G.M.Y. and K.O.O. prepared the initial manuscript draft, covering the introduction, methods, results and discussion. Co-authors strengthened the analysis, offered detailed revisions and enhanced the clarity and coherence of the final

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document. Every author reviewed the complete manuscript, approved the final version and accepted responsibility for the integrity of the work.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

FUNDING

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

ACKNOWLEDGEMENT

The authors acknowledge the management and technical staff of PENKUP Research Institute, Birmingham, UK, for their excellent assistance and for providing manuscript writing and editorial support in accordance with the Good Publication Practice (GPP3) guidelines.

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