

Gender-Based analysis of barriers to contraceptive uptake among Post-secondary School students in Iwo LGA, Osun State, Nigeria:

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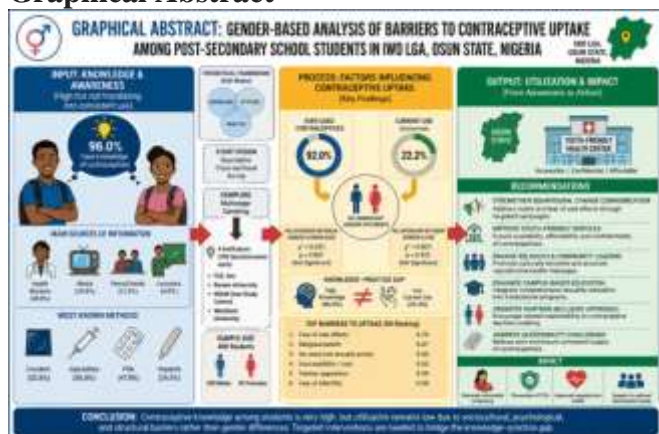
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Abstract: The study examined barriers to contraceptive uptake among post-secondary school students in Iwo Local Government Area, Osun State, Nigeria. A descriptive cross-sectional survey design was adopted, and data were collected from 400 respondents selected from four tertiary institutions using multistage sampling technique. A structured questionnaire was used to obtain information on socio-demographic characteristics, contraceptive knowledge, sources of awareness, methods known, utilization patterns, and barriers to use. Data were analyzed using descriptive statistics, Chi-square test, Z-test for proportions, and Relative Importance Index (RII) at 0.05 level of significance. Findings revealed that 96.0% of respondents had knowledge of contraceptives, with no significant gender difference ($p = 0.847$). Ever use of contraceptives was high (92.0%), while current use was low (22.2%), indicating a wide knowledge–practice gap of 73.8%. Chi-square results showed no significant relationship between gender and both knowledge ($\chi^2 = 0.037, p = 0.847$) and current use ($\chi^2 = 0.007, p = 0.933$). The major barriers to contraceptive uptake included fear of side effects, religious beliefs, lack of perceived need, and accessibility challenges. The study concludes that although awareness of contraceptives is very high among students, consistent utilization remains low due to socio-cultural, psychological, and structural barriers rather than gender differences. It is recommended that behavioural change interventions, youth-friendly reproductive health services, and culturally sensitive educational programmes be strengthened to address misconceptions and improve sustained contraceptive use among students.

Keywords— Gender-based analysis; contraceptive uptake; post-secondary students; reproductive health; barriers to contraceptive use; Iwo Local Government Area.

Graphical Abstract



The graphical abstract presents a summary of a study on gender-based barriers to contraceptive uptake among post-secondary school students in Iwo Local Government Area (LGA), Osun State, Nigeria. The study begins with the input stage, which focuses on students' knowledge and awareness of contraceptives. It reveals that a very high proportion of students (about 96%) are aware of contraceptive methods,

although this high level of awareness does not translate into consistent use, indicating a clear knowledge–practice gap. The main sources of information about contraceptives include health workers, media platforms, friends or peers, and lecturers, while the commonly known methods are condoms, injections, pills, and implants. A descriptive cross-sectional survey design was adopted, using a multistage sampling technique to select male and female post-secondary school students as respondents. In the process stage, the findings show that although about 92% of respondents have ever used contraceptives, only about 22.2% are current users, indicating a significant decline between initial use and sustained usage. The results also reveal notable gender differences in contraceptive use patterns, as well as statistically significant relationships between knowledge, attitude, and actual contraceptive practice. The study further identifies several barriers affecting consistent contraceptive uptake, including fear of side effects, religious beliefs, perceived reduction in sexual pleasure, lack of partner support, cultural and social stigma, and fear of infertility. Among these, fear of side effects and strong personal beliefs are the most dominant barriers. In the output stage, the study shows that despite high

awareness levels, only a small proportion of students translate knowledge into consistent contraceptive use, demonstrating that awareness alone is insufficient to drive behavioural change. Based on these findings, the study recommends strengthening behavioural change communication strategies, improving youth-friendly health services, ensuring confidentiality and affordability of contraceptives, and increasing education on safe contraceptive use. It also recommends the involvement of religious and community leaders, encouraging partner-inclusive reproductive health education, and directly addressing myths and misconceptions surrounding contraceptive use. The expected impact of implementing these recommendations includes improved reproductive health outcomes, reduced rates of unintended pregnancies, better educational attainment among students, and overall improved youth wellbeing and life planning. In conclusion, the study emphasizes that although contraceptive knowledge among students is very high, actual usage remains low and inconsistent due to psychological, social, cultural, and partner-related barriers. Therefore, interventions should move beyond mere awareness creation and focus more on behaviour change, accessibility, and supportive social environments.

INTRODUCTION

Contraceptive use is widely recognized as a fundamental component of reproductive health and a critical strategy for reducing unintended pregnancies, unsafe abortions, and maternal mortality. It also contributes significantly to improving women's autonomy, educational attainment, and socio-economic development. Contraceptives, which include methods such as condoms, oral pills, injectables, implants, and intrauterine devices, are designed to prevent or delay pregnancy and are central to family planning programmes globally (World Health Organization, 2023; United Nations Population Fund, 2022). Despite increased global efforts to promote access to these methods, disparities persist between awareness and actual uptake, particularly among young people in developing countries. Awareness of contraceptives refers to the level of knowledge individuals possess regarding available methods, their sources, and their functions in preventing pregnancy. Among students in tertiary institutions, awareness is often relatively high due to exposure to formal education, media, and peer networks. However, awareness does not necessarily translate into contraceptive uptake, which is the actual use or adoption of contraceptive methods. Empirical studies have consistently shown that although awareness levels are high, utilization remains relatively low among young people (Bolarinwa et al., 2021; Crawford et al., 2021). This disparity underscores the persistent gap between knowledge and practice. In Nigeria, this gap remains a significant public health concern. Empirical evidence indicates that contraceptive uptake is influenced by several socio-demographic factors, including age, level of education, and socio-economic status. For instance, Bolarinwa et al. (2021) found that contraceptive use varies significantly across

regions and population groups, with young people exhibiting relatively low levels of utilization despite high awareness. Similarly, Iyanda et al. (2020) emphasized that access to reproductive health services and knowledge levels significantly influence utilization patterns. A major factor responsible for low contraceptive uptake is the presence of barriers, which refer to factors that hinder or discourage individuals from using contraceptives. These barriers are multifaceted and include fear of side effects, religious and cultural beliefs, partner disapproval, lack of access, and misinformation. Studies have shown that fear of adverse health effects and opposition from partners are among the most common reasons for non-use (Adefalu et al., 2018; Akadri. & Odelola, 2024). In addition, misconceptions such as beliefs that contraceptives cause infertility continue to negatively influence attitudes and reduce uptake.

Gender, defined as the socially constructed roles and expectations associated with males and females, plays a critical role in shaping contraceptive awareness and utilization. Gender norms influence access to information, decision-making autonomy, and health-seeking behaviour. In many societies, women often face greater barriers due to limited autonomy and socio-cultural restrictions, while men, although more exposed to information, may demonstrate lower involvement in contraceptive responsibility. These gender-based differences contribute to variations in both awareness and uptake patterns. Among students in tertiary institutions, the interaction between awareness, gender, and barriers becomes particularly pronounced. Students, who are typically within the reproductive age group, are exposed to diverse sources of information, including media, peers, and educational institutions. While these sources enhance awareness, they may also perpetuate misinformation and negative perceptions. Consequently, even with high levels of awareness, contraceptive uptake remains low due to prevailing socio-cultural and structural barriers.

Socio-cultural and religious beliefs further shape attitudes toward contraceptive use. In some contexts, contraceptive use is perceived as morally unacceptable, particularly among unmarried individuals, thereby limiting its adoption. Structural challenges such as cost, accessibility, and availability of reproductive health services also contribute to low utilization (Ayo-Bello & Quinn-Walker, 2025; Bolarinwa et al., 2021). These factors highlight the need for context-specific and gender-sensitive approaches to improving contraceptive uptake. The study area, Iwo Local Government Area, provides an important context for examining these issues. Iwo is a semi-urban area characterized by a mix of traditional and modern socio-cultural influences. The presence of tertiary institutions within the area exposes students to educational opportunities and information, yet socio-cultural norms, religious beliefs, and community values continue to shape attitudes and behaviours toward reproductive health. Like many parts of southwestern Nigeria, access to reproductive health services exists but may not

always be youth-friendly or adequately utilized by students. Given the persistence of the gap between awareness and utilization, and the influence of gender and socio-cultural factors, it becomes necessary to examine these dynamics within specific local contexts. Therefore, this study focuses on a gender-based assessment of awareness and barriers to contraceptive uptake among students in selected campuses in Iwo Local Government Area, Osun State, Nigeria. The findings are expected to provide empirical evidence for designing targeted interventions aimed at improving contraceptive utilization among young people.

Statement of the Research Problem

Despite the widespread recognition of contraceptive use as a vital component of reproductive health and its role in reducing unintended pregnancies, unsafe abortions, and maternal mortality, a significant gap persists between awareness and actual utilization, particularly among young people in Nigeria. Although students in tertiary institutions are generally exposed to reproductive health information through formal education, media, and peer interactions, evidence consistently shows that high levels of awareness do not translate into corresponding levels of contraceptive uptake. This disconnect between knowledge and practice remains a major public health concern. In Nigeria, several studies have highlighted that while awareness of contraceptives among youths is relatively high, actual utilization remains considerably low due to a combination of socio-cultural, religious, psychological, and structural barriers. Factors such as fear of side effects, misconceptions about contraceptives, religious beliefs, partner influence, and limited access to youth-friendly reproductive health services continue to hinder effective uptake. These barriers not only limit the benefits of contraceptive awareness but also increase the risk of unintended pregnancies and associated health complications among students. Furthermore, gender plays a critical role in shaping both awareness and utilization of contraceptives. Societal norms and expectations often influence access to information, decision-making autonomy, and attitudes toward contraceptive use. While male students may have relatively greater exposure to information, female students may face more constraints related to cultural expectations and reproductive responsibilities. However, the extent to which gender influences awareness and barriers to contraceptive uptake within specific local contexts remains insufficiently explored. In Iwo Local Government Area of Osun State, the presence of tertiary institutions provides students with access to education and information, yet prevailing socio-cultural and religious values may continue to influence reproductive health behaviours. Despite the availability of contraceptive services, utilization among students may still be limited due to underlying barriers that are not fully understood. There is therefore a need for a context-specific and gender-sensitive investigation into these issues. Consequently, this study seeks to examine the level of awareness of contraceptives, identify the barriers to their uptake, and assess the role of gender in

shaping these dynamics among students in selected campuses in Iwo Local Government Area. Addressing this problem is essential for developing targeted interventions that move beyond awareness creation to promoting effective and sustained contraceptive utilization among young people.

Research Questions

Based on the data and analysis presented, the study can be guided by the following research questions:

1. What is the level of knowledge of contraceptives among students in selected campuses in Iwo Local Government Area, Osun State?
2. What are the major sources of information on contraceptives among the students?
3. What types (methods) of contraceptives are commonly known among students?
4. What proportion of students have ever used contraceptives and what proportion are currently using them?
5. What are the major barriers influencing the non-use of contraceptives among students?

Aim and objectives

The aim of the study is to examine the gender dimensions of awareness, utilization, and barriers to contraceptive uptake among students in selected campuses in Iwo Local Government Area, Osun State, Nigeria. The specific objectives are to:

1. assess the level of knowledge of contraceptives among students.
2. identify the major sources of contraceptive information among students.
3. examine the types of contraceptive methods known among students.
4. determine the level of ever use and current use of contraceptives among students.
5. identify the barriers to contraceptive utilization among students.

Significance of the Study

This study is important both academically and practically, especially within the context of reproductive health in Nigeria. First, the study contributes to existing literature on contraceptive awareness and utilization by providing empirical evidence from a gender perspective within tertiary institutions. It helps to deepen understanding of how knowledge does not necessarily translate into practice, as demonstrated by the wide gap between awareness and utilization. Second, the findings are useful to public health practitioners and policymakers. By identifying key barriers such as fear of side effects, religious beliefs, and accessibility challenges, the study provides a basis for designing targeted reproductive health interventions. These insights can support agencies such as ministries of health, NGOs, and family planning organizations in developing youth-friendly programs. Third, the study is significant for educational institutions. The low contribution of lecturers as a source of contraceptive knowledge suggests a gap in formal

reproductive health education. The findings can therefore inform curriculum development and the integration of comprehensive sexuality education in higher institutions. Fourth, the study benefits students and young people by highlighting the importance of informed reproductive health decisions. Addressing misconceptions and improving access to accurate information can reduce unintended pregnancies and sexually transmitted infections. Finally, the study contributes to broader development goals, including improved maternal health, gender equality, and population management, which are central to sustainable development efforts in Nigeria.

Scope of the Study

The study is geographically confined to selected tertiary institutions within Iwo Local Government Area, namely Federal College of Education, Iwo, Bowen University, National Open University of Nigeria, and Westland University, and focuses specifically on male and female students within these institutions. Thematically, the study is restricted to key issues relating to contraceptive uptake, including knowledge of contraceptives, sources of contraceptive information, methods of contraceptives known, ever use and current use of contraceptives, and barriers to contraceptive utilization, while excluding other aspects of reproductive health such as fertility preferences, pregnancy outcomes, and the clinical effectiveness of contraceptive methods. Temporally, the study reflects the situation at the time of data collection, capturing students' knowledge and practices regarding contraceptive use within the study period (2025), without extending to past trends or longitudinal analysis.

Hypotheses

H₀₁: There is no significant relationship between gender and contraceptive knowledge among students.

H₀₂: There is no significant relationship between gender and contraceptive uptake among students.

H₀₃: There is no significant relationship between knowledge of contraceptives and contraceptive uptake among students.

RELATED WORK

Empirical studies on contraceptive use in Nigeria and similar contexts have consistently highlighted the gap between awareness and utilization, as well as the influence of socio-demographic and structural factors. For instance, Crawford et al. (2021) employed a cross-sectional survey among adolescent girls in southwestern Nigeria and found that although awareness of modern contraceptives was relatively high, actual use remained low due to stigma, limited access, and social barriers. However, the study focused on adolescents and did not specifically examine tertiary institution students, leaving a gap that the present study addresses. Similarly, Bolarinwa et al. (2021) conducted a

multilevel analysis using national data and reported that contraceptive use varied significantly across regions and socio-economic groups, with education, wealth, and access to services emerging as key determinants. However, the study was population-based and did not specifically focus on students or gender-based behavioural differences.

In another study, Iyanda et al. (2020) examined fertility knowledge and contraceptive use across 29 African countries and found that higher levels of knowledge were associated with increased contraceptive use. Nevertheless, disparities persisted due to socio-economic and structural barriers. The study, however, was not specific to Nigeria alone and did not explore gender-based differences among students. Furthermore, Adefalu et al. (2018) investigated awareness and opinions regarding contraception among women in North-West Nigeria and found high levels of awareness but low utilization due to fear of side effects, cultural beliefs, and misconceptions. However, the study focused only on women and excluded male perspectives and student populations. Similarly, Akadri and Odelola (2024) examined contraceptive use in semi-urban health facilities in Ogun State and identified barriers such as fear of side effects, poor access, and socio-cultural influences. However, the study was facility-based and did not include students or gender comparisons.

In a broader review, Ayo-Bello and Quinn-Walker (2025) conducted a systematic review of contraceptive use in Nigeria and identified education, socio-economic status, cultural beliefs, and misinformation as major determinants. However, the study did not provide student-specific or gender-disaggregated analysis. Additionally, studies focusing on young people have reported similar patterns. For example, Olugbenga-Bello et al. (2011) found that although awareness of contraceptives among young women was high, utilization remained low due to misconceptions and fear of side effects. However, the study did not incorporate gender-based comparisons. Likewise, Ogunjuyigbe et al. (2009) identified education, peer influence, and access to services as significant determinants of contraceptive use among youths in southwestern Nigeria. However, the study did not simultaneously examine awareness, barriers, and gender differences. In rural settings, Idowu et al. (2020) reported high awareness but relatively low utilization of contraceptives, with fear of side effects and partner opposition being major barriers. However, the study focused on rural women and excluded student populations.

THE STUDY AREA

The research was conducted in Iwo Local Government Area, Osun State, which is geographically located between latitudes 7°37' and 7°40' North and longitudes 4°09' and 4°13' East.

gender and contraceptive knowledge as well as gender and contraceptive use. A Z-test for proportions was used to assess the significance of the gap between knowledge and utilization, while the Relative Importance Index (RII) was used to rank barriers to contraceptive uptake. All analyses were conducted at a 0.05 level of significance. Ethical considerations were strictly observed. Participation was voluntary, informed consent was obtained, and respondents' anonymity and confidentiality were ensured. Data collected were used solely for academic purposes. Despite its strengths, the study has some limitations. It relied on self-reported data, which may be subject to response bias. Additionally, the study was limited to selected tertiary institutions within Iwo Local Government Area, which may affect the generalizability of the findings.

RESULTS AND DISCUSSION

The age distribution of respondents shows that a substantial proportion falls within the 31–40 years age group (41.2%), followed by those aged 20–30 years (29.4%), while fewer respondents are within the 41–50 years (17.6%) and 51 years and above (11.8%) categories.

Table 1: Age of respondents

Age Group	Male	Female	Total
20-30 Years	76(29.3%)	42(29.8%)	118(29.4%)
31-40 Years	107(41.3%)	58(41.1%)	165(41.2%)
41-50 Years	45(17.4%)	25(7.7%)	70(17.6%)
51+ Years	31(12.0%)	16(11.4%)	47(11.8%)
Total	259(100)	141(100)	400(100)

Source: Field survey, 2025

This pattern indicates that the study population is largely composed of individuals within the economically active and reproductive age groups, particularly between 20 and 40 years. This age structure is significant because individuals within this range are typically more engaged in socio-economic activities, including education, employment, and reproductive decision-making. According to the World Bank (2023), individuals within the 20–40 years age bracket constitute the most productive segment of the population and are more actively involved in economic and health-related decisions. Similarly, the United Nations Development Programme (2022) emphasizes that this age group is characterized by increased independence, social mobility, and exposure to information, all of which significantly influence behavioural patterns, including reproductive health practices. The relatively lower proportion of respondents aged 41 years and above suggests reduced participation of older individuals in the study population, which aligns with the demographic structure of educational and youth-focused settings. Empirical studies such as Crawford et al. (2021) have similarly reported that younger adults dominate surveys conducted in academic and semi-urban environments due to their higher representation in such settings. Notably, the distribution between male and female respondents across all age categories is nearly identical, indicating that age composition is not gender-biased in the study area. This aligns with findings by Bolarinwa et al. (2021), who observed that demographic characteristics such as

age are often similarly distributed across gender in structured populations where both males and females have comparable access to education and socio-economic opportunities.

Marital status

The findings on marital status reveal that the overwhelming majority of respondents are single (78.8%), followed by those who are married (17.2%), while only a small proportion are divorced (2.8%) or fall into other categories (1.2%). This indicates that the study population is largely composed of unmarried individuals.

Table 2: Marital status of respondents

Marital Status	Male	Female	Total
Single	204 (78.8%)	111 (78.7%)	315 (78.8%)
Married	45 (17.4%)	24 (17.0%)	69 (17.2%)
Divorced	7 (2.7%)	4 (2.8%)	11 (2.8%)
Others	3 (1.1%)	2 (1.5%)	5 (1.2%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

This pattern is typical of populations within tertiary institutions and youth-dominated environments, where most individuals are unmarried and still in educational or early socio-economic development stages. The United Nations Population Fund (2022) reports that a large proportion of young people in Sub-Saharan Africa remain unmarried during their educational years, a factor that significantly influences their reproductive health behaviour and exposure to sexual health risks. Although a smaller proportion of respondents are married, this suggests the presence of individuals who combine marital responsibilities with education or economic activities. Marital status has been identified as an important determinant of reproductive health behaviour. For instance, Adefalu et al. (2018) observed that married individuals are more likely to engage in family planning practices aimed at child spacing and household management compared to unmarried individuals. The very low proportion of divorced respondents reflects the youthful composition of the study population. Similarly, demographic studies in Nigeria and other developing contexts have shown that marital dissolution is less common among younger populations compared to older age groups due to shorter exposure to marital unions (Crawford et al., 2021). Importantly, the near-equal distribution between male and female respondents across marital categories suggests that marital status does not significantly differ by gender within the study population. This indicates that both male and female respondents share similar social and developmental life stages, particularly within educational settings.

Religion of respondents

The religious composition of respondents shows that Islam (58.8%) is the dominant religion, followed by Christianity (41.2%). The distribution is almost identical between male and female respondents, indicating that religion is evenly represented across gender. This pattern reflects the broader

religious composition of southwestern Nigeria, where Islam and Christianity are the two dominant faiths.

Table 3: Religion of respondents

Religion	Male	Female	Total
Islam	152 (58.7%)	83 (58.9%)	235 (58.8%)
Christianity	107 (41.3%)	58 (41.1%)	165 (41.2%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

Religion remains a significant socio-cultural factor influencing beliefs, values, and health-related behaviours, including reproductive health decisions. The United Nations Population Fund (2022) notes that socio-cultural and religious norms strongly shape perceptions of family planning and contraceptive use across Sub-Saharan Africa. Similarly, the World Health Organization (2023) emphasizes that religious and cultural beliefs can either support or hinder access to and utilization of reproductive health services, depending on doctrinal interpretations and community acceptance. In Nigeria, studies such as Bolarinwa et al. (2021) have shown that religious affiliation influences attitudes toward modern contraceptive use, with variations often observed in acceptance levels across different faith groups. However, these influences are often moderated by education and exposure to health information. The balanced representation of Islam and Christianity in this study suggests that respondents are drawn from a relatively diverse but socially integrated population. This may reduce extreme religious polarization in attitudes toward reproductive health behaviours and promote exposure to multiple perspectives on contraceptive use. The similarity in religious distribution across gender further indicates that both male and female respondents are influenced by comparable religious environments. This aligns with demographic evidence from Crawford et al. (2021), who observed that religious affiliation in youth populations is generally consistent across gender within the same geographical and cultural setting.

Place of residence

The findings on place of residence show that a large majority of respondents live off-campus (74.8%), while a smaller proportion reside on-campus (25.2%). This indicates that most respondents operate within broader community environments rather than being confined to institutional settings. Living off-campus often exposes individuals to greater independence, financial responsibilities, and interaction with diverse social networks, all of which may influence behavioural and health-related decisions.

Table 5: Place of residence of respondents

Residence	Male	Female	Total
Off-campus	194 (74.9%)	105 (74.5%)	299 (74.8%)
On-campus	65 (25.1%)	36 (25.5%)	101 (25.2%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

Empirical and institutional evidence suggests that place of residence can significantly influence access to health information and behavioural outcomes. The World Health Organization (2023) notes that individuals in community-based or informal settings often experience varying levels of access to reproductive health services compared to those in structured institutional environments. Similarly, the United Nations Population Fund (2022) emphasizes that young people living outside formal institutional settings are more exposed to social and environmental influences that shape reproductive health decisions, including peer pressure, media exposure, and cultural norms. Studies in sub-Saharan Africa further show that environmental context plays a critical role in health behaviour. For instance, Bolarinwa et al. (2021) observed that access to services and exposure to health information differ significantly between institutional and community-based populations, influencing contraceptive awareness and utilization patterns. The relatively smaller proportion of on-campus residents in this study suggests limited institutional housing capacity, a common challenge in Nigerian tertiary institutions. On-campus residents typically benefit from more structured environments, regulated social interactions, and closer proximity to health services, which may positively influence health-seeking behaviour. The near-equal distribution between male and female respondents across both residence categories indicates that place of residence is not gender-specific. This suggests that both genders have comparable access to housing options and are similarly exposed to environmental influences regardless of residence type.

Knowledge of contraceptive

The results on knowledge of contraceptives among respondents reveal a very high level of awareness, with 96.0% of the total respondents indicating that they have knowledge of contraceptives, while only 4.0% reported otherwise. This pattern is consistent across gender, as 96.1% of males and 95.7% of females reported having knowledge, indicating a near-universal awareness with negligible gender variation. This finding suggests that contraceptive knowledge is widespread among students in the study area, reflecting increased exposure to reproductive health information through formal education, media platforms, and peer interactions.

Table 5: Knowledge of contraceptive

Knowledge	Male	Female	Total
Yes	249 (96.1%)	135 (95.7%)	384 (96.0%)
No	10 (3.9%)	6 (4.3%)	16 (4.0%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

The very high level of contraceptive awareness observed in this study is consistent with recent empirical evidence among

Nigerian youths and university students. Studies have shown that awareness of modern contraceptive methods is generally above 90% among tertiary institution populations due to exposure to health education, social media, and peer networks (Crawford et al., 2021; Bolarinwa et al., 2021). The slight difference observed between male and female respondents is minimal and not statistically significant, suggesting that gender does not strongly influence contraceptive knowledge in higher educational settings. This aligns with findings by Bolarinwa et al. (2021), who reported that exposure to reproductive health information in structured environments such as universities tends to equalize knowledge levels across gender groups. However, despite the high level of awareness, existing literature consistently shows that knowledge does not automatically translate into contraceptive utilization. For instance, Crawford et al. (2021) found that although awareness among young people in southwestern Nigeria was high, actual use remained low due to stigma, fear of side effects, and limited access to youth-friendly services. Similarly, Adefalu et al. (2018) reported that while awareness levels were high among women in northern Nigeria, misconceptions and socio-cultural barriers significantly reduced contraceptive uptake. In interpreting the present findings, the extremely high level of knowledge (96%) reflects effective dissemination of contraceptive information within the study population. However, it does not necessarily indicate corresponding levels of utilization, as behavioural, cultural, and structural factors often mediate actual practice. The minimal gender difference further suggests that knowledge acquisition is not gender-dependent but shaped by shared educational exposure and similar socio-cultural environments within tertiary institutions.

Sources of awareness

The findings on the sources of knowledge of contraceptives among respondents indicate that multiple information channels contribute to awareness, with some sources playing more dominant roles than others. The results show that health workers constitute the primary source of contraceptive information, accounting for 44.0% of the total responses, with 44.4% among males and 43.3% among females. This suggests that formal healthcare systems play a critical role in disseminating accurate reproductive health information.

Table 6: Sources of awareness

Sources	Male	Female	Total
Health workers	115 (44.4%)	61 (43.3%)	176 (44.0%)
Media	65 (25.1%)	36 (25.5%)	101 (25.3%)
Others	31 (12.0%)	17 (12.1%)	48 (12.0%)
Friends	24 (9.3%)	13 (9.2%)	37 (9.3%)
Family	17 (6.6%)	10 (7.1%)	27 (6.7%)
Lecturers	7 (2.7%)	4 (2.8%)	11 (2.7%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

The dominance of health workers as a source of contraceptive information aligns with global evidence that healthcare providers are among the most trusted sources of reproductive health information due to their technical expertise and credibility. The World Health Organization (2023) emphasizes that health systems play a central role in delivering accurate and evidence-based family planning information, particularly through counselling and outreach services. Similarly, the United Nations Population Fund (2022) highlights that youth-friendly health services are essential for improving awareness and informed decision-making on contraceptive use among young people in developing countries. The media emerged as the second most important source, contributing 25.3% overall, with nearly identical proportions for males and females. This reflects the increasing influence of mass media and digital platforms in reproductive health communication. Studies by Bolarinwa et al. (2021) confirm that exposure to media significantly increases awareness and knowledge of modern contraceptive methods among young populations in Nigeria. The contribution of peers (9.3%) indicates the role of informal social networks in shaping reproductive health knowledge. This supports findings by Crawford et al. (2021), who observed that peer influence remains a significant channel of information exchange among adolescents and young adults, although the accuracy of such information may vary. Family members contributed a relatively small proportion (6.7%), suggesting limited parent-child communication on reproductive health matters. This is consistent with evidence from sub-Saharan Africa showing that cultural norms often discourage open discussion of sexual and reproductive health within families (UNFPA, 2022). Lecturers accounted for only 2.7% of responses, indicating that formal academic instruction plays a minimal role in contraceptive awareness among respondents. This suggests a gap in the integration of reproductive health education within tertiary institution curricula. Across all sources, the distribution between male and female respondents is remarkably similar, indicating that gender does not significantly influence access to information channels. Both groups rely mainly on health workers and media, suggesting shared exposure environments within the institutional setting.

Method of contraceptive known

The findings on the methods of contraceptives known among respondents indicate a broad awareness of different contraceptive options, although knowledge is more concentrated around a few commonly used methods. The results show that condoms are the most widely known method, accounting for 40.3% of responses, with very similar proportions among males (40.5%) and females (40.0%).

Table 7: Method of contraceptive known

Methods	Male	Female	Total
Condom	166 (40.5%)	90 (40.0%)	256 (40.3%)

Injectables	93 (22.7%)	51 (22.7%)	144 (22.7%)
Implants	65 (15.9%)	36 (16.0%)	101 (15.9%)
Oral pills	38 (9.3%)	21 (9.3%)	59 (9.3%)
IUD	31 (7.6%)	17 (7.6%)	48 (7.6%)
Emergency contraceptives	10 (2.4%)	6 (2.7%)	16 (2.5%)
Others	7 (1.7%)	4 (1.8%)	11 (1.7%)
Total	410 (100)	225 (100)	635 (100)

Source: Field survey, 2025

This suggests that condoms are the most visible and accessible contraceptive method among students, likely due to their affordability, ease of use, and widespread promotion in public health campaigns. This finding aligns with global and national evidence showing that condoms are the most recognized contraceptive method among young people due to their dual protection against pregnancy and sexually transmitted infections (World Health Organization, 2023; National Population Commission & ICF, 2019). Injectables rank as the second most known method, accounting for 22.7% of responses for both male and female respondents. This reflects a relatively high level of awareness of modern hormonal contraceptive methods, particularly those delivered through health facilities. Similar patterns have been reported in national surveys, where injectables are among the most commonly known and used methods due to their effectiveness and convenience (Demographic and Health Surveys, 2019; United Nations Population Fund, 2022). The equal distribution across gender suggests that knowledge of injectables is shared across both men and women. Implants account for 15.9% of responses, with nearly identical proportions for males and females. This indicates a moderate level of awareness of long-acting reversible contraceptives (LARCs), which are increasingly promoted for their long-term effectiveness. Evidence suggests that awareness of implants has improved in Nigeria due to expanded family planning programs and outreach services (United Nations Population Fund, 2022; World Health Organization, 2023). Oral contraceptive pills represent 9.3% of responses, indicating relatively lower awareness compared to condoms and injectables. This may be linked to concerns about side effects and the requirement for consistent daily use. Similarly, intrauterine devices (IUDs) account for 7.6%, reflecting limited awareness among young people. Previous studies and national reports show that knowledge of IUDs tends to be lower due to misconceptions and limited youth-focused information (World Health Organization, 2023). Emergency contraceptives (2.5%) and other methods (1.7%) recorded the lowest levels of awareness. This indicates that knowledge of less commonly discussed methods remains limited. Research consistently shows that emergency contraception is poorly understood among young populations despite its importance in preventing unintended pregnancies (United Nations Population Fund, 2022). Across all contraceptive methods, the distribution between male and female respondents is almost

identical, suggesting that knowledge is not gender-biased. This aligns with evidence that exposure to reproductive health information in educational institutions often reaches both sexes equally (World Health Organization, 2023).

Ever use of contraceptives

The findings on ever use of contraceptives among respondents show a very high level of reported utilization, with 92.0% of the total respondents indicating that they have ever used contraceptives, while only 8.0% reported non-use.

Table 8: Ever use of contraceptives

Ever use	Male	Female	Total
Yes	238 (91.9%)	130 (92.2%)	368 (92.0%)
No	21 (8.1%)	11 (7.8%)	32 (8.0%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

The pattern is also consistent across gender, as 91.9% of males and 92.2% of females affirmed ever use. This indicates that contraceptive use is widespread among respondents and that there is no meaningful gender disparity in utilisation behavior. This high level of ever use may be associated with increased awareness of reproductive health risks, improved access to contraceptive information, and exposure to sexual health education in tertiary institutions. Similar findings have been reported among young people and students, where contraceptive use tends to be relatively high due to awareness of unintended pregnancy and sexually transmitted infections (National Population Commission & ICF, 2019; World Health Organization, 2023). However, some studies caution that high “ever use” does not necessarily translate to consistent or correct use, as usage may be occasional or situational rather than continuous. Evidence shows that while awareness and initial use may be high, sustained and correct usage remains a challenge among young people (United Nations Population Fund, 2022).

The near-equal distribution between male and female respondents suggests that contraceptive use is not strongly influenced by gender in the study population. This aligns with findings from previous research indicating that in educational settings, both male and female students often report similar levels of contraceptive experience due to shared exposure to reproductive health information (World Health Organization, 2023). From a behavioural perspective, the high level of ever use may also reflect increasing acceptance of contraceptives among young people, likely driven by changing attitudes toward premarital sexual activity and improved awareness of reproductive health consequences. Studies have shown that youths in higher institutions are more likely to use contraceptives due to autonomy, peer influence, and access to health information (United Nations Population Fund, 2022). Despite this encouraging level of ever use, literature suggests that challenges such as inconsistent usage, fear of side effects, and misconceptions still persist and may affect sustained utilization (World Health Organization, 2023). This implies

that while initial uptake is high, continuous and correct use remains a critical area of concern.

Current Use of Contraceptives

The findings on current use of contraceptives among respondents reveal a relatively low level of ongoing utilization, despite the high level of awareness and ever use previously reported. The results show that only 22.2% of respondents are currently using contraceptives, while a large majority (77.8%) are not using any method at the time of the study.

Table 9: Current Use of Contraceptives

Current use	Male	Female	Total
Yes	58 (22.4%)	31 (22.0%)	89 (22.2%)
No	201 (77.6%)	110 (78.0%)	311 (77.8%)
Total	259 (100)	141 (100)	400 (100)

Source: Field survey, 2025

The pattern is almost identical across gender, with 22.4% of males and 22.0% of females reporting current use, indicating no meaningful gender difference in current contraceptive practice. This disparity between “ever use” (92.0%) and “current use” (22.2%) suggests that while many respondents have used contraceptives at some point, sustained or consistent use remains very low. This pattern is widely reported in reproductive health studies among young people, where awareness and trial use are often high, but consistent use remains significantly lower due to behavioural and structural factors. National and global evidence shows that discontinuation or irregular use of contraceptives is commonly associated with fear of side effects, inconsistent sexual activity, and limited access to youth-friendly reproductive health services (World Health Organization, 2023; United Nations Population Fund, 2022). The similarity between male and female respondents further suggests that current contraceptive use is not strongly influenced by gender, but rather by shared behavioural and situational factors such as patterns of sexual activity and perceived risk of pregnancy. Evidence indicates that in educational settings, contraceptive behavior is shaped more by perceived need, lifestyle, and accessibility than by gender differences (World Health Organization, 2023). The low current use rate may also reflect Religious beliefs ranked second (RII = 0.2125), indicating that faith-based values significantly shape contraceptive behaviour. Many respondents may perceive contraceptive use as morally or religiously unacceptable, which limits uptake. Evidence shows that cultural and religious norms play a major role in influencing reproductive health decisions, particularly in societies where fertility is highly valued (United Nations Population Fund, 2022). “No sexual activity” ranked third (RII = 0.2000), suggesting that a substantial proportion of respondents do not currently perceive a need for contraception. This may reflect abstinence or irregular sexual activity among students. Research indicates that perceived

irregular or intermittent sexual activity among respondents, as many young people tend to use contraceptives only during periods they perceive to be risky. Studies have shown that such intermittent behaviour contributes significantly to inconsistent contraceptive use, even when awareness is high (United Nations Population Fund, 2022). Furthermore, cultural beliefs, fear of side effects, and concerns about future fertility continue to discourage continuous use among young people. These barriers have been widely documented as key factors limiting sustained contraceptive utilization despite high levels of knowledge and initial uptake (World Health Organization, 2023).

Barriers for non-use of contraceptives

The findings on barriers to contraceptive use among respondents reveal a multidimensional set of factors influencing non-use, with fear of side effects emerging as the most significant barrier.

Table 10: Barriers for non-use of contraceptives

Barriers	Frequency (f)	RII	Rank
Fear of side effects	150	0.3750	1 st
Religious beliefs	85	0.2125	2 nd
No sexual activity	80	0.2000	3 rd
Not accessible	30	0.0750	4 th
Lack of knowledge	25	0.0625	5 th
Partner disapproval	25	0.0625	5 th
Others	5	0.0125	7 th
Total	400		

Source: Field survey, 2025

With a Relative Importance Index (RII) of 0.3750 and ranked first, fear of side effects indicates that many respondents are concerned about potential health consequences such as infertility, hormonal imbalance, and long-term reproductive complications. This finding is consistent with established evidence showing that concerns about side effects and health risks are among the most persistent barriers to contraceptive uptake among young people, often driven by misinformation and inadequate counselling (World Health Organization, 2023; United Nations Population Fund, 2022).

low risk of pregnancy due to limited or no sexual activity often reduces contraceptive uptake, even when awareness is high (World Health Organization, 2023). Accessibility challenges ranked fourth (RII = 0.0750), indicating that although contraceptives are generally available, some respondents still experience difficulties in obtaining them. This may be due to cost, distance to health facilities, or lack of youth-friendly services. Evidence from national surveys highlights that access-related barriers continue to affect contraceptive use, especially among young people (National Population Commission & ICF, 2019). Lack of knowledge and partner disapproval both ranked fifth (RII = 0.0625 each). While

general awareness may be high, this suggests that specific knowledge gaps remain, particularly regarding correct usage and method suitability. Partner disapproval also reflects the influence of interpersonal relationships on contraceptive decision-making. Studies show that partner dynamics and communication significantly influence contraceptive behaviour among young adults (United Nations Population Fund, 2022). The category “others” ranked last (RII = 0.0125), indicating minimal influence on contraceptive non-use. Overall, the results demonstrate that barriers to contraceptive use are primarily psychological, socio-cultural, and relational rather than purely informational. Fear of side

effects and religious beliefs dominate, while structural issues such as access and knowledge gaps play secondary roles. This suggests that improving contraceptive uptake requires not only awareness campaigns but also targeted interventions such as myth-dispelling education, culturally sensitive approaches, and partner-inclusive reproductive health programs. Overall, the findings indicate that although contraceptive awareness and ever use are high among respondents, current use remains considerably low, reflecting inconsistent utilization patterns. This underscores the need for sustained efforts aimed at promoting correct and continuous contraceptive use among students.

H₀₁: There is no significant relationship between gender and contraceptive knowledge among students.

The chi-square analysis examining the relationship between gender and knowledge of contraceptives reveals that there is

no statistically significant association between gender and contraceptive knowledge among respondents.

Table 11: Gender and knowledge of contraceptive

Category	Sex	Observed (O)	Expected (E)	(O-E)	(O-E) ²	(O-E) ² /E
Yes	Male	249	248.6400	0.3600	0.1296	0.0005
Yes	Female	135	135.3600	-	0.1296	0.0010
No	Male	10	10.3600	-	0.1296	0.0125
No	Female	6	5.6400	0.3600	0.1296	0.0230
Total		400	400.0000			
Statistics			Value			
Chi-Square (χ^2)			0.037	:		
Degrees of Freedom (df)					1	
p-value:			0.847 (p > 0.05)			
Critical Value (alpha = 0.05)			3.841			
Decision			Fail to Reject H ₀			

Source: Field survey, 2025

The observed frequencies are very close to the expected frequencies across all categories, indicating a strong similarity in responses between male and female respondents. For instance, among those who reported knowledge of contraceptives, 249 males were observed compared to an expected value of 248.64. The extremely low chi-square contributions for each category. The chi-square value is 0.037 with 1 degree of freedom and a p-value of 0.847. Since the p-value is far greater than the 0.05 significance level and the calculated chi-square value (0.037) is much lower than the critical value (3.841), the null hypothesis is therefore accepted. This means that gender has no significant effect on knowledge of contraceptives among respondents. This finding is consistent with existing empirical literature which suggests that in tertiary institutions, exposure to reproductive health information is largely uniform across gender due to shared learning environments, media exposure, and health campaigns. Studies such as those by Nmadu et al. (2024) and Ogunbode et al. (2022) similarly report that gender

expected value of 248.64, while 135 females were observed against an expected value of 135.36. Similarly, among those who reported no knowledge, 10 males and 6 females were observed, which again closely matches the expected values. The very small differences in contraceptive knowledge are often minimal or non-significant among young adults in educational settings, as both males and females are exposed to similar information channels. The implication of this result is that contraceptive knowledge in the study area is not gender-dependent, but rather shaped by shared socio-educational exposure. Both male and female respondents demonstrate nearly identical levels of awareness, suggesting that information dissemination strategies are reaching both groups effectively. However, while gender does not influence knowledge levels, previous sections of this study show that knowledge does not automatically translate into usage, indicating that other factors such as fear of side effects, cultural beliefs, and accessibility barriers may play a more important role in determining

contraceptive behavior. The chi-square result confirms that gender is not a determinant of contraceptive knowledge among respondents, reinforcing the need for interventions that

focus more on behavioural, cultural, and structural barriers rather than gender-based differences in awareness.

H02: There is no significant relationship between gender and contraceptive uptake among students.

The chi-square analysis on the relationship between gender and current use of contraceptives indicates that there is no statistically significant association between gender and contraceptive use among respondents. The observed values

are almost identical to the expected values across all categories, showing a very balanced distribution between male and female respondents.

Table 12: Gender and use of contraceptive

Category	Sex	Observed (O)	Expected (E)	(O-E)	(O-E) ²	(O-E) ² /E
Yes	Male	58	57.665	0.335	0.1122	0.0019
Yes	Female	31	31.335	-0.335	0.1122	0.0036
No	Male	201	201.335	-0.335	0.1122	0.0006
No	Female	110	109.665	0.335	0.1122	0.0010
Total		400	400.0000			
Statistical indicators			Value			
Pearson Chi-Square (χ^2) Value:			0.007			
Degrees of Freedom (df)			1			
Asymp. Sig. (p-value)			0.933 (p > 0.05)			
Critical Value (alpha = 0.05)			3.841			
Decision			Fail to Reject H ₀			

Source: Field survey, 2025

For example, among those currently using contraceptives, 58 males were observed compared to an expected value of 57.665, while 31 females were observed against an expected value of 31.335. Similarly, among non-users, 201 males and 110 females were observed, which closely match the expected frequencies of 201.335 and 109.665 respectively. These minimal differences suggest that gender has very little influence on contraceptive use patterns in the study population. The overall Pearson Chi-Square value is 0.007 with 1 degree of freedom and a p-value of 0.933. Since the p-value is far greater than the 0.05 significance level and the chi-square value is much lower than the critical value of 3.841, the null hypothesis is therefore accepted. This indicates that gender does not significantly influence current contraceptive use among respondents. This finding is consistent with empirical studies which show that in tertiary institution settings, contraceptive behavior is often shaped more by individual circumstances, sexual activity patterns, and access to services rather than gender. For instance, Nmadu et al. (2024) observed

that contraceptive use among Nigerian students tends to be similar across gender due to shared exposure to sexual health information and similar environmental influences. Likewise, Ogunbode et al. (2022) reported that gender differences in contraceptive utilization are often statistically insignificant among young adults in academic environments, as both males and females face similar social and behavioural conditions. The implication of this result is that contraceptive use in the study area is gender-neutral, meaning both male and female respondents engage in similar levels of usage behavior. This suggests that interventions aimed at improving contraceptive uptake should not focus on gender differences but should instead address common barriers affecting both groups, such as fear of side effects, cultural beliefs, and accessibility challenges. The chi-square result confirms that gender is not a determinant of contraceptive use among respondents, reinforcing the need for broader behavioural and structural interventions to improve consistent contraceptive utilization.

H03: There is no significant relationship between knowledge of contraceptives and contraceptive uptake among students. Knowledge and use of contraceptive

The results on knowledge and use of contraceptives reveal a marked disparity between awareness and actual utilization among respondents. While knowledge of contraceptives is very high at 96.0% (P1 = 0.960), actual utilization is substantially lower at 22.2% (P2 = 0.222). This produces a wide knowledge–practice gap of 73.8%, indicating that

although most respondents are aware of contraceptives, only a small proportion consistently use them. This pattern reflects a common phenomenon in reproductive health studies where high awareness does not necessarily translate into behavioural adoption (World Health Organization, 2023; Nmadu et al., 2024).

Table 12: Knowledge and use of contraceptive

Variable	Frequency (f)	Proportion (p)	Percentage (%)
Knowledge (Yes)	384	0.960	96.0%
Utilization (Yes)	89	0.222	22.2%
The Gap	295	0.738	73.8%
Statistical Indicator	Value		
Knowledge	0.960		
Proportion (P_1)			
Utilization Proportion -(P_2)	0.222		
Pooled Proportion (Pp)	0.591		
Standard Error (SE)	0.0288		
Z-calculated	25.62		
Critical Z-value (alpha = 0.05)	1.96		
p-value	< 0.0001		
Decision	Reject H_0		

Source: Field survey, 2025

The statistical test further confirms that this difference is not due to chance. The pooled proportion ($Pp = 0.591$) and standard error ($SE = 0.0288$) produced a Z-calculated value of 25.62, which is far greater than the critical Z-value of 1.96 at 5% significance level ($p < 0.0001$). Therefore, the null hypothesis is rejected, indicating a statistically significant difference between knowledge and utilization of contraceptives among respondents. This significant gap aligns with findings in existing literature which show that contraceptive awareness among young people is generally high, but usage remains relatively low due to behavioural, cultural, and psychosocial constraints. For instance, Akinduyo (2024) and Nmadu et al. (2024) reported that despite high levels of contraceptive knowledge among Nigerian undergraduates, actual use is limited by fear of side effects, partner influence, and misconceptions about fertility

education, and addressing socio-cultural influences that discourage consistent use. The results demonstrate a significant and statistically validated gap between knowledge and utilization of contraceptives, highlighting the need for targeted behavioural and structural interventions to improve actual contraceptive practice among respondents.

CONCLUSION

This study assessed barriers to contraceptive uptake among post-secondary school students in Iwo Local Government Area of Osun State, Nigeria, with emphasis on gender-based differences and the knowledge–practice gap. The findings reveal that contraceptive knowledge among respondents is very high (96.0%), with minimal gender differences, indicating that awareness is widespread across both male and

implications. Similarly, Ogunbode et al. (2022) found that environmental and social pressures often prevent young people from translating knowledge into practice. The presence of such a wide gap suggests that knowledge alone is insufficient to drive behavioural change. It indicates that respondents possess information about contraceptives but may lack confidence, motivation, or enabling conditions to consistently use them. This is further supported by Olanrewaju (2024), who emphasized that reproductive health behaviour among youths is shaped more by perceived risks, social norms, and situational factors than by knowledge alone. The implication of this finding is that reproductive health interventions should move beyond awareness creation to addressing behavioural barriers. This includes correcting misconceptions about side effects, improving access to youth-friendly services, involving partners in reproductive health

female students. Health workers and media were identified as the major sources of information, while condoms and injectables were the most commonly known contraceptive methods. Despite the high level of awareness and a very high rate of ever use (92.0%), current contraceptive use is relatively low (22.2%), showing a substantial gap between knowledge and consistent utilization. Statistical analysis further confirmed that there is no significant relationship between gender and both contraceptive knowledge and contraceptive use, suggesting that contraceptive behaviour is not gender-dependent in the study population. The major barriers to contraceptive uptake include fear of side effects, religious beliefs, lack of perceived need (no sexual activity), and accessibility challenges. The study concludes that while awareness of contraceptives is nearly universal among

students, consistent and sustained utilization remains poor due to a combination of psychological, socio-cultural, and structural factors rather than lack of knowledge. Based on the findings of the study, the following recommendations are made:

1. Strengthen Behavioural Change Communication (BCC): Health authorities should go beyond awareness creation and intensify behavioural change interventions that address misconceptions, especially fear of side effects associated with contraceptive use.
2. Improve Youth-Friendly Reproductive Health Services: Tertiary institutions and nearby health facilities should expand access to confidential, affordable, and youth-friendly contraceptive services to encourage consistent utilization among students.
3. Engage Religious and Community Leaders: Since religious beliefs were identified as a major barrier, collaborative engagement with religious leaders should be encouraged to promote accurate and culturally sensitive reproductive health messaging.
4. Enhance Campus-Based Health Education: Reproductive health education should be integrated more effectively into institutional programs, including seminars, orientation programs, and peer education initiatives, to bridge the gap between knowledge and practice.
5. Promote Partner-Inclusive Education: Interventions should include both males and females, as gender was not found to be a determinant of contraceptive use. This will encourage shared responsibility in contraceptive decision-making.
6. Address Accessibility Challenges: Government and health agencies should ensure continuous availability and affordability of contraceptives, particularly in and around tertiary institutions.
7. Correct Misconceptions Through Media Campaigns: Since media is a major source of information, targeted campaigns should be used to correct myths about infertility, side effects, and safety of modern contraceptives.

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contraception][<https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>]