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Contraceptives' Usage Among Undergraduates in Yoruba Ethnic Group of Nigeria: The Roles of Age and Gender

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ABSTRACT: This study explored the influence of age and gender on contraceptive use among undergraduates in South-West Nigeria. The primary aim was to examine how contraceptive use among students is moderated by age and gender. The research employed a descriptive survey design, with a sample of 1,200 undergraduates (both male and female, aged 15 and above) selected through a multi-stage sampling method. Data were collected using a self-developed questionnaire, the "Contraceptive Usage Questionnaire" (CUQ), which had a Pearson reliability coefficient (r) of 0.70. Inferential statistics were used for data analysis, with t-tests and ANOVA employed to test the hypotheses. When the ANOVA results indicated significant differences, a Scheffe Posthoc test was conducted to pinpoint the specific areas of significance. The results revealed that gender does not significantly affect contraceptive use among undergraduates, whereas age plays a role in determining usage patterns. Based on these findings, the study recommends that government and university authorities collaborate to introduce a comprehensive sexuality education course to inform students about responsible contraceptive use. Additionally, professional counselors and relevant stakeholders should hold bi-monthly seminars and workshops to educate students on the proper and acceptable use of contraceptives.

Keywords: Age, contraceptive usage, gender, Nigeria, undergraduates.

***ABSTRAK**: Penelitian ini mengeksplorasi pengaruh usia dan jenis kelamin terhadap penggunaan kontrasepsi di kalangan mahasiswa di wilayah Barat Daya Nigeria. Tujuan utamanya adalah untuk mengkaji bagaimana penggunaan kontrasepsi di kalangan mahasiswa dipengaruhi oleh faktor usia dan jenis kelamin. Penelitian ini menggunakan desain survei deskriptif, dengan sampel sebanyak 1.200 mahasiswa (baik pria maupun wanita, berusia 15 tahun ke atas) yang dipilih melalui metode sampling bertingkat. Data dikumpulkan menggunakan kuesioner yang dikembangkan sendiri, yaitu "Kuesioner Penggunaan Kontrasepsi", yang memiliki koefisien reliabilitas Pearson (r) sebesar 0,70. Statistik inferensial digunakan untuk menganalisis data, dengan uji t dan ANOVA untuk menguji hipotesis. Ketika hasil ANOVA menunjukkan perbedaan yang signifikan, uji Posthoc Scheffe dilakukan untuk menentukan area spesifik dari perbedaan tersebut. Hasil penelitian mengungkapkan bahwa jenis kelamin tidak memiliki pengaruh signifikan terhadap penggunaan kontrasepsi di kalangan mahasiswa, sementara usia mempengaruhi pola penggunaan. Berdasarkan temuan ini, penelitian merekomendasikan agar pemerintah dan pihak universitas bekerja sama untuk memperkenalkan mata kuliah pendidikan seksual yang komprehensif guna memberikan informasi kepada mahasiswa tentang penggunaan kontrasepsi yang bertanggung jawab. Selain itu, konselor profesional dan pemangku kepentingan terkait diharapkan menyelenggarakan seminar dan lokakarya dua bulanan untuk mengedukasi mahasiswa mengenai penggunaan kontrasepsi yang tepat dan dapat diterima.*

***Kata kunci**: jenis kelamin, mahasiswa, Nigeria, penggunaan kontrasepsi, usia.*

Introduction

Generally, in the African context, contraceptive usage appears to be culturally approved for mature adults in marital relationships. Contraception tends to be the method(s) used to prevent unplanned pregnancies, sexually transmitted infections and coordinated effort in spacing the number of children in a legally solemnized relationship. Contraception though old as the creation of man could either be in the form of modern or traditional methods. Often, contraceptive usage has been the exclusive right of individuals or couples to use for safety, health improvement and mutual sexual benefits. It may be to the point, to say that undergraduates who are majorly adolescents use contraceptives out of cultural and marital contexts.

The accessibility of undergraduates to improved technological know-how often promotes the use of modern contraceptives over traditional contraceptive methods maybe because of their vigor. Almalik, et al. (2018) posited that modern contraceptive methods have been encouraged for usage than traditional methods based on their effectiveness and potency. Starrs et al. (2018) affirmed the potency of modern contraceptives to have staved off approximately 308 million unplanned pregnancies in the year 2017 alone. Unfortunately, among almost 14 million unplanned pregnancies recorded in Sub-Saharan Africa yearly, 44 percent of the victims are young girls aged 15-24 years (Ameyawet al., 2019; Geda, 2019). In the year 2012, developing countries reported 138 million abortions with 40 million cases recorded as unsafe (World Health Organization, 2014). Also, of all the 98 percent of unsafe abortions reported in African developing countries, 70 percent are adolescents below 20 years of age resulting in hospitalization due to unsafe abortions (Atuhaire, 2019). Young people within the age range of 15-24 years of age are not exempted from the increased number of sexually transmitted infections (STIs). According to Francis et al. (2018), adolescents/young people in Africa have a high record of different sexually transmitted infections with many being asymptomatic.

Conceptually, the usage of contraceptives (both traditional and modern), may be influenced by some demographic characteristics (e.g., age and gender) which may determine how, when and why contraceptives are being used by undergraduates. Any decision made by any undergraduate also keeps them aware of the consequence(s). Fishbein and Ajzen (1975) affirmed that decision-making and intention (attitude towards behaviour or subjective norms) precede the exhibition of any behaviour. Therefore, undergraduates out of a personal willingness and/or the prescription of society decide to use or not to use contraceptives (behaviour).

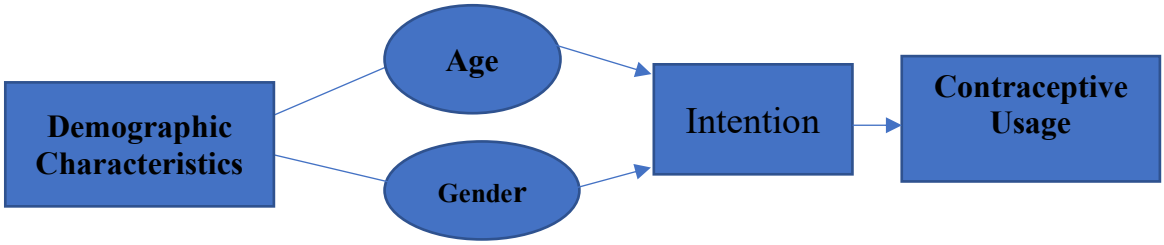

Figure 1. Conceptual framework

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Despite the increased awareness about modern contraceptive usage, undergraduates are often victims of sexually transmitted infections and unplanned pregnancies. According to Habimana & Mureithi (2020), undergraduates face sexual and reproductive health challenges exposing them to a series of unfavourable health challenges. Undergraduates may intentionally avoid the usage of contraceptives as a result of stigmatization, shyness cultural taboos and/or the enjoyment of full skin-to-skin sexual pleasure syndrome (FSSSPS). Todd and Black (2020) described fear of weight gain, constant bleeding, acne, fertility concerns, risk of cancer and mood swings as factors prompting young people's phobia towards contraceptive usage.

Demographic Factors

The age of undergraduates is a factor in contraceptive usage in Southwest, Nigeria. From the researcher's observation, young undergraduates regularly use contraceptives to mainly prevent pregnancies. Young undergraduates might want to initially concentrate on their academic activities rather than opting for abortion. Hence, older undergraduates tend to be adapted to the university environment's activities and might have experimented with different kinds of contraceptives. Older undergraduates seem knowledgeable about contraceptive usage and might feel abortion is the best option in case of any unintended pregnancy. Nyarko (2015) found that older adolescents used contraceptives more than younger adolescents. This was traced to increased age, enlightenment, knowledge of importance/consequence, experience, and increased education as undergraduates. Lakew et al. (2013) posited that younger women used modern contraception more than older women in Ethiopia. Makola et. al. (2019) argued that undergraduates who had their sexual debut at the age of 15 years or older considered the usage of contraceptives earlier than any other age group. This could be traceable to courage, access to contraceptives, affordability, education, age of the male partner, and socialization.

Male undergraduates seem to be less worried about contraceptive usage than females since they are not at risk of unintended pregnancy. Struckman-Johnson (2009) revealed that male undergraduates believed they could not be impregnated, but mainly were interested in sexual pleasure. Studies have shown that in developing countries, men decide on women's maternal health services, which greatly affects women's general health outcomes (Bado et al., 2020; Yargawa & Jo Leonardi-Bee, 2015). On the other hand, female undergraduates do bear the most consequences when pregnancy occurs. Therefore, females use contraceptives, especially when having sexual relationships with males who are not their husbands or ready to marry them (Damicule, 2002).

According to Achana et al. (2015), females in Northern Ghana were not allowed to make decisions even with issues of reproductive health. Approval of modern contraceptives has been allocated as the man`s sole responsibility. This strict patriarchal responsibility assigned to men only proceeds to view childbearing as the biological duty of a woman. Blanc & Wolff (2012) found that gender

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inequality existed between males and females in deciding the type of contraceptive usage. Many males admitted that females were not entitled to any decision-making which unconditionally placed women in a disadvantaged position. Abugiri (2015) affirmed that females who used modern contraceptives were referred to as being unfaithful and promiscuous. Women who carry along contraceptives such as condoms are viewed as wayward or flirting individuals. It appears stressful for female undergraduates to carry pregnancies and babies to classrooms for academic activity, though doing this may not be forbidden in the academic environment but poses serious problems to undergraduates' full concentration on academic pursuits. Several undergraduates seem to have been reported dead, because of abortion carried out to terminate unintended pregnancies and/or STIs. Adolescents who could be regarded as undergraduates are faced with adverse health, educational problems, social and economic hardships (Wado, 2019); maternal death, diseases, fistula, health risks, obstetric fistula and STIs (UNESCO, 2017). It seems disturbing that society and religious organizations are not interested in discussing issues relating to undergraduates' reproductive health. This culture of neglect tends to have contributed to the increasing rate of unintended pregnancies, increased rate of STIs and high rate of abortions and/or unsafe abortions. The researcher also observed that the usage of contraceptives by undergraduates may have some consequences on total the well-being of undergraduates. As reported by Akinsoji et al. (2015), undergraduates had high knowledge of contraceptives, but this knowledge does not tone with its consistent use, with 31.2 percent of undergraduates neglecting the use of contraception during the last coital relationship.

Understanding the fact that there are frightening problems associated with undergraduates' reproductive health in Nigeria will be of benefit to undergraduates, policymakers, religious organizations, parents, health workers, researchers, and psychologists. Therefore, there is a need to investigate characteristics such as age and gender that influence contraceptive usage among undergraduates in the Yoruba ethnic group of Nigeria.

Theoretical Framework

The theoretical framework for this study was based on the Health Belief Model (HBM), which social scientists in the United States Public Health Service propounded in the 1950s (Electronics & Devi, 2022). HBM assists in identifying and predicting variables that influence the usage of contraceptives in a particular population and society (Hall, 2012). The theory does not perceive humans as irrational and insane, but a human has the innate ability to apply different techniques in making health decisions (Rosenstock, 1974a & Rosenstock, 1974b). Theoretically, an undergraduate without an exception to age and gender can deliberately decide to engage in any health-related behaviour of his or her choice. This may include decision-making to use or not to use contraceptives in preventing unplanned pregnancies. Given this theory, undergraduates are motivated to weigh the consequences of unplanned pregnancies and other health risks (e.g., contracting Sexually Transmitted Infections). Hence, the intention and personal

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belief to use contraceptives. HBM spells out susceptibility to diseases, awareness of the consequences of actions taken and benefits of actions taken (Devil, 2022). Going forward, making informed health decisions that may prevent the occurrence of unplanned pregnancy and health risks established that HBM best suits this study.

Research Question

One research question is generated to guide this study: What are the demographic details of undergraduates in the Yoruba ethnic group of Nigeria?

Hypotheses

Two research hypotheses were generated and tested at 0.05 level of significance: 1) There is no significant difference between male and female undergraduates' usage of contraceptives; 2) Age has no significant influence on undergraduates' contraceptive usage.

RESEARCH METHOD

Research Design

A descriptive research design of the survey type was used for this study. The design is considered appropriate because it focuses on the characteristics (Manjunatha, 2019) and existing phenomena of undergraduates' contraceptive usage. This helps in gathering information about the phenomena or situations mainly to investigate and describe the variables as they presently exist naturally in the population. The design enabled the researcher to capture a large sample size to generalize concerning the population.

Population

The target population for this study comprised all undergraduates in both private and public universities in in Southwest, Nigeria. According to National Universities Commission (2019), reported 254,411 undergraduates that enrolled for undergraduate courses.

Sample and Sampling Techniques

The sample of 1,200 respondents was considered enough for this study as suggested by research advisor. This ensured justification for the representativeness of the selected states, universities, and faculties. The undergraduates that constituted the population were male and female undergraduates within the age range of 15 to 30 years. The researchers agreed that undergraduates within the age range might have matured, experienced sexual intimacy, engaged in sexual activities and exposed to reproductive behaviors. The Also, the selected sample outline how this number adequacy for generalizing findings of this study. All the respondents were selected through a multi-stage sampling procedure. At stage one, simple random sampling was used in selecting three states from the six states in Southwest, Nigeria. At stage two, the researcher purposively picked two universities (One public and one private)

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from each of the selected three states making a total of six universities. At stage three, a simple random sampling technique was used to select four faculties in each university. At stage four, a total of 1200 respondents were selected from all the six selected universities. In each university, 200 respondents consisting of 100 males and 100 females were selected through a stratified random sampling technique.

Ethical Statement

Before the administration of the research instrument, the two research assistants explained the content of the instrument to all participants individually. Those who were not willing to participate in the study declined, while those who were willing to participate in the study gave their verbal consents, and voluntarily participated without any compensation. Following Tankala (2022), ethical rules such as the encryption of the data through the usage of password in securing the data, keeping the demographic variables of the respondents anonymous, securing respondent's' information and deleting of data after use were ensured.

Research Instrument

The instrument used for the study was a questionnaire titled "Contraceptive Usage Questionnaire" (CUQ). The instrument has two sections: A and B. Section A elicits information on the demographic variables of the respondents such as gender and age. In consultation with literature and experts in the field of reproductive health, section B contained 40 items designed to obtain information on the usage of contraceptives by undergraduates. Section B is patterned in a four-point scale format with options of: To a Very Great Extent (4 points), Great Extent (3 points), Low Extent (2 points) and Very Low Extent (1 point). Since the instrument is patterned in the four-point Likert scale format, the cut-off mean will be 2.50 (that is, 4+3+2+1 divided by 4 = 2.50). Therefore, any item that has a mean score of 2.50 and above on the 40 items constituting contraceptive usage was considered as high engagement in contraceptive usage, while mean scores below 2.50 were considered as low engagement in contraceptive usage.

Psychometric properties of the instrument

To ensure that the research instrument measured what it was designed to measure, face and content validity were ensured. To validate the instrument, the researchers gave copies of the research instrument to three experts in Tests and Measurement. These experts made necessary suggestions and were incorporated in to the final draft of the research instrument in order to ensure that the instrument measure what was designed to measure. The reliability of the instrument was determined by adopting a test-retest method. It was administered to 20 University of Ilorin undergraduates outside the sample twice at an interval of two weeks. The scores obtained from the two administrations were correlated using Pearson Product Moment Correlation (PPMC). A reliability coefficient of 0.70 was obtained. The coefficient was considered high enough, hence, the instrument was adjudged reliable and adequate for the study.

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Administration of Instrument

The research instrument was personally administered by the researcher and a trained research assistant in the selected states. As explained by Eaton (2017), the research assistant was trained on functioning participation in researchers' meetings, collaborative efforts, recruitment procedures, data privacy, data storage/anonymity and other research ethical rules. The researchers took time to explain the purpose of the research instrument which was solely for research purpose. Due to the sensitivity of the items in the questionnaire, the researcher explained that the instrument was used for research purpose alone and assured the respondents of the confidentiality of their responses. To guide against the loss of the instrument, ensure consistency and prevent data loss or biases, the researchers and research assistant collected the instrument from the respondents immediately after completion for collation and data analysis purposes.

Data Analysis

The data collected were analysed using descriptive and inferential statistics. Data obtained on demographic variables of the respondents in section A and the research question were analysed using descriptive statistics (simple percentage, mean, standard deviation and frequency counts). The hypotheses were tested using inferential statistics using Statistical Package for the Social Sciences (SPSS) software. According to Rahman & Muktadir (2021) affirmed that SPSS helped in accurate data representation; transformation and capacity to analyze different quantitative data effectively (Arkkelin, 2014). Specifically, hypotheses 1 and 2 were subjected to t-test and ANOVA inferential statistics respectively and were tested at 0.05 level of significance. t-test was used to compare means of only two groups (i.e., gender); showing the significant difference on how male and female undergraduates used contraceptives. ANOVA was considered suitable for the analysis of hypothesis 2, because it is an inferential statistic showing significant differences in the means of more than two levels/groups (e.g., age of undergraduates using contraceptives despite they were not legally married).

RESULTS

Table 1. Distribution of Respondents by Age

Age Group	N	Percentage
15-19 years	407	33.9
20-24 years	549	45.8
25-29 years	175	14.6
30 years and Above	69	5.8
Total	**1200**	**100**

Table 1 shows that 1,200 respondents participated in the study. The result shows that 407 respondents representing 33.9%of the total sample were within the age group of 15-19 years. 549 (45.8%) respondents were within the age range of 20-24 years old. Also, 175 (14.6%) respondents were within the age range of 25 – 29 years old. 69 respondents representing 5.8% of the total sample were 30

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years and above. It then implies that the majority of the sample was within the age range of 20-24 years old.

Table 2. Distribution of Respondents by Gender

Gender	N	Percentage
Female	600	50.0
Male	600	50.0
Total	**1200**	**100**

Table 2 indicates that 1,200 respondents participated in the study out of which 600 (50%) were females and 600 (50%) were males.

Hypotheses testing

Hypothesis 1: *There is no significant difference between male and female undergraduates' usage of contraceptives*

Table 3. Comparison of Undergraduates' Contraceptive Usage by Gender

Variables P-Values	N	Mean	SD	df	t-cal.	Crit. t-table
Female	600	68.27	26.27	1198	0.806	1,96
Male	600	25.62	25.62		0.421	

p> 0.05

Table 1 shows that the mean values for female and male undergraduates' usage of contraceptives are 68.27 and 25.62 respectively while the standard deviation values were 26.27 and 25.62 respectively. Table 1 further shows that the t-calculated value was 0.806 and the t-table value was 1.96 while the degree of freedom was 1198 with a significant level at p>0.05. The table further reveals that the t-calculated value of 0.806 is less than the critical table value of 1.96. The null hypothesis is therefore accepted. Hence, there is no significant difference between male and female undergraduates' usage of contraceptives. This implies that there is no significant difference between male and female undergraduates' usage of contraceptives. Therefore, gender has no significant influence on undergraduates' contraceptive usage.

Hypothesis 2*: Age has no significant influence on undergraduates' contraceptive usage*

Table 2. Summary of Analysis of Variance (ANOVA) of Undergraduates' Contraceptive Usage by Age

Source of Variable	Sum of squares	df	Means of square	Cal. F-ration	Critic f-ration	p-values
Between groups	28034.502	3	9344.834	14.352*	3.00	0.000
Within groups	778727.218	1196	651.110			

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Total	806761.720	1196				

P < 0.05

Table 2 shows that the calculated F-ratio of 14.352 is higher than the critical F-ratio of 3.00 with a corresponding P-value of 0.000 at 0.05 level of significance. Since the calculated F-ratio is greater than the critical F-ratio, the hypothesis is therefore rejected. The null hypothesis is rejected. Therefore, there is a significant difference between undergraduates' age and contraceptive usage. To locate the sources of the significant difference among the groups, Scheffe posthoc analysis was carried out as presented in Table 3 below:

Table 3. Scheffe Posthoc Analysis of Undergraduates' Contraceptive Usage on the basis of Age

S/N	Age	1	2	3	4	N	Mean
1	15-19 years		*	*	*	407	62.88
2	20-24 years					549	70.12
3	25-29 years					175	75.94
4	30 years and above					69	76.32

* Denotes pairs of groups that are significantly different at 0.05 level of significance.

Table 3 shows that undergraduates aged 15 – 19 years with a mean score of 62.88 differ significantly from those within 20-24 years with a mean score of 70.12; 25 – 29 years with a mean score of 75.94; 30 years and above age bracket with the mean score of 76.32 in their contraceptive's usage at 0.05 level in each case.

DISCUSSION

According to the current analysis, 407 (33.9%) undergraduates within the age range of 15-19 years; 549 (45.8%) undergraduates within the age range of 20-24 years; 175 (14.6%) undergraduates within the age range of 25-29years; 69 (5.8%) undergraduates within the age range of 30 years and above all participated in the study. Also, 600 (50%) female and 600 (50%) male undergraduates respectively voluntarily participated in the study.

The result of hypothesis one showed that irrespective of gender type, undergraduates equally use contraceptives. This finding corroborates the finding of Ojo (2016) that undergraduates use contraceptives regularly due to education, campaigns and social networking by the government and non-government agencies to curb the scourge of sexually transmitted infections and unplanned pregnancies. This was further boosted by the provision of contraceptives at stores rather than patronizing family planning clinics. This contradicts the finding of Struckman-Johnson (2009) that males are careless about the usage of contraceptives because of their belief that they cannot be impregnated. Males and females had different perceptions towards the usage of contraceptives (Gomez-Torez, 2023); with women not given full authority to decide when and how to use contraceptives Lai & Tey, 2020; MacQuarrie et al., 2022). In addition, advocating for women to use contraceptives regularly helps to make appropriate decisions

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and autonomous reproductive health status (Kalamar, 2022). Males' commitment to the usage of contraceptives in Africa was low, despite facilitating a reduction in the fertility process, improving maternal and child health (Abose et al., 2021; Odimegwu, 2023). Conversely, males and females' gender have been reported to rarely use contraceptives as adolescents (Liu et al., 2023); with many adolescents being misinformed and having poor access to contraceptives (Bolshakova, et al., 2020). Males and females had various reasons for using contraceptives differently to suit their intentions based on each gender's requirements (Huber-Krum & Norris (2020). As found by Chola et al. (2020), the historical pattern of contraceptive usage over the years found that adolescents living with their sexual partners used more contraceptives more than those not living with their partners. This shows that since many public university undergraduates in Southwest Nigeria, cohabit and use more contraceptives. Males also believe they can get optimum sexual pleasure without using contraceptives. The reason for this finding might be that engagement in sexual behaviour needs protection from unwanted pregnancies and prevention of sexually transmitted infections.

The result of hypothesis two revealed that undergraduates in different age range groups used contraceptives differently. This corroborates the finding of Salako (2009) who argued younger undergraduates use contraceptives more than older students. Because younger students are more careful about relationships and do not want to be impregnated at all. However, older students rely so much on their class level and experience in avoiding pregnancy. More so, older students are not worried about engaging in abortion to remove unintended pregnancies. In the same vein, Ekholuenetale et al. (2021) found that the rate of contraceptive usage in Nigeria is low, with adolescents having different age ranges individuals could be initiated into the use of contraceptives. For over 18 years (i.e., 1996-2014), there was low usage of contraceptives among adolescents due to factors such as age, education and marital status (Chola et al., 2020). Low contraceptive usage in Ethiopia has led to high complications during pregnancies and over 270,000 deaths in sub-Saharan Africa every year (Oumer, et al., 2020). Apambila et al. (2020) found that age determines contraceptive usage, as adolescents in their early 20s use more contraceptives than older ones; while Nigerian young girls perceived contraceptive usage as risky early in life (Kahn et al., 2023). This contradicts the findings of Makola et. al. (2019) argued that undergraduates who had their sexual debut at the age of 15 years or older considered the usage of contraceptives earlier than any other age group. The plausible reason for this finding might be a result of experience gained on-campus differs among undergraduates and this makes their usage of contraceptives differ. Also, the knowledge gained from experimentation and trial and error methods in using contraceptives might cause different approaches to contraceptive usage.

CONCLUSION

The findings suggest that both male and female undergraduates use contraceptives equally and always crave protection against unintended pregnancies and sexually transmitted infections. This finding reveals that both

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male and female undergraduates were aware of the negative consequences of neglecting commensurate contraceptives, when necessary, that in turn reduce the risks of unintended pregnancies, sexually transmitted infections, mortality rate, risky abortions and poor academic performance. Age influences contraceptive usage among undergraduates. Undergraduates in various age groups use contraceptives differently.

Recommendations

Based on the findings the government at all tiers in collaboration with the university management should introduce sex education as a course to enlighten undergraduates and inform them of moderation needed as expected hem in their contraceptive usage. Professional Counsellors and relevant stakeholders should always organize seminars and workshops for undergraduates on the acceptable usage of contraceptives.

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