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ORIGINAL RESEARCH

PATTERNS AND PREDICTORS OF CONTRACEPTIVE UPTAKE AMONG WOMEN ATTENDING FAMILY PLANNING CLINIC IN A TERTIARY HEALTH FACILITY IN SOUTH-WEST NIGERIA: A 10-YEAR REVIEW

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Abstract

Introduction: Contraception is a cost-effective way of reducing maternal morbidity and mortality in Sub-Saharan Africa, where its utilisation is still significantly low despite the alarming rate of unemployment and economic downturn. The choice and acceptability of different contraceptives depend on myriad factors. The study aimed to determine the patterns and predictors of contraceptive uptake among women attending a family planning clinic in a tertiary health facility in South-West Nigeria.

Methods: This was a 10-year retrospective, descriptive study of the women who sought contraceptive services at the family planning clinic of Federal Medical Centre, Abeokuta, from 1 January 2011 to 31 December 2020. Relevant data were collected from the available records, coded, and analysed with the Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistics were computed for all data, and the results were presented in tables and charts. Chi-square was used to test for significance, and a p-value < 0.05 was considered statistically significant.

Results: A total number of 3,023 women accessed contraceptive services during the study period with clients between the ages of 17 and 56 years, and the highest percentage (36.3%) of contraceptive usage was between 30-34 years, whereas 8.2% of women below the age of 25 years utilised contraceptive care services. The most common method of contraception used was implants, whereas the least common method was Bilateral Tubal Ligation (BTL). The relationship between age, parity, and level of education with the preferred methods of contraception was statistically significant (p=0.000). The lowest uptakes of contraception were recorded in 2011 and 2020. Information about contraception predominantly (71.6%) emanated from clinical personnel.

Conclusion: The acceptability of different contraceptive methods is multifactorial, and the relevant stakeholders should be apprised of these critical determinants in policy formulation and implementation.

Key words: Contraception, Determinant, Family planning, Utilisation

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INTRODUCTION

Contraceptive uptake in Nigeria has remained considerably low in the last decade.[1] It is an economically-viable means of reducing maternal morbidity and mortality while ultimately assisting in achieving sustainable development goals.[2,3] Family planning protects women from high-risk pregnancies, unwanted pregnancies, unsafe abortions, and sexually transmitted infections, including HIV/AIDS (use of barrier methods), in addition to ensuring that the mother stays healthy for herself, family, and society through liberal contraceptive uptake.[4] Africa has the fastest-growing population in the world and is expected to have over 1.8 billion people by 2035.[5] Nigeria is projected to be the third most populous country by 2050. It has been unable to meet the set targets for expected contraceptive uptake amidst surging unemployment and a dwindling economy.[6]

The current contraceptive prevalence rates among women in Nigeria are 17% and 20% for single and married, respectively.[7] Nigeria still has one of the lowest contraceptive uptake in Africa despite her commitment to attaining a 36% prevalence rate by 2018 from the initial 15% reported in 2013.[7] Nigeria has a population of approximately 200 million with a national growth rate of 3.2%, a total fertility rate of 5.5%, and a maternal death rate of 512 per 100,000 live births.[7,8] The highest regional contraceptive uptake in Nigeria was 26.7%, recorded in the South West, while the lowest was 2.7% in North-Western Nigeria, despite currently experiencing rising unemployment and socio-economic deprivation, Nigeria remains the most populous country in Africa, with a current average of 5.9 children born to women in rural areas and 4.5 children in urban women.[9,10]

The highest predictors of modern contraceptive uptake are education and wealth index. Hence, measures should be taken to improve female literacy, employment and empowerment.[11] The challenges of contraceptive uptake in Nigeria are influenced primarily by superstition and cultural beliefs, fear of side effects of the contraceptive agents, ignorance, and misinformation, which vary for different geopolitical zones.[12,13] Recently, the uptake of long-acting contraceptives has been on a decline for some of these reasons.[14] There is a widely-held cultural belief that children are divine gifts and procreation should not be regulated as their care is heavenly addressed. Hence, the desire for more children has proven to be a significant challenge for contraceptive uptake. Women are therefore considered responsible for increasing the family size, and failure to do so often attracts negative judgment from society.[15] Spousal disapproval of the woman's desire for contraception, premised on the male partner's belief that the woman could indulge in infidelity, has further reduced the contraceptive uptake among Nigerian women, particularly in rural communities.[14]

A systematic review identified client-related and healthcare provider-related factors responsible for low contraceptive uptake and choice among Nigerian women despite a contraceptive awareness of 82.4% in North-West to 90% of women in South-West Nigeria.[16,17] Healthcare provider-associated factors recognised include the cost of services, difficulty in accessing services, procurement difficulties, long distances of contraceptive sources, poor service delivery, suboptimal counselling, healthcare facility dependence on donors, women being made to be responsible for the purchase of the required consumables, stock out and providers' adherence to cultural practices instead of refuting them.[18,19] The client-related factors noted comprise the level of education, desire for more children, individual religious beliefs, cultural disapproval, spousal disapproval, uncertainty about the need for family planning, age, marital status, wealth index, ignorance, shyness, domestic violence, sexuality and sexual concerns.[18,19] The prevalence and pattern of contraceptive uptake are determined by the interplay of several factors; hence, we must review these events in our immediate environment. Multiple socio-cultural, geographical, political, and economic factors could play a significant role in the suitability and acceptability of different contraceptive methods. The relevant stakeholders are expected to have detailed background knowledge of the pattern of contraceptive uptake to guide decision-making processes. This study aimed to determine the pattern and predictors of contraceptive uptake amongst women attending family planning clinics of a tertiary hospital in South-West Nigeria, and essentially, the findings would be used in policy formulation and implementation soon.

MATERIALS AND METHODS

Study design

This is a 10-year retrospective descriptive study of the women who sought contraceptive services at the family planning clinic Federal Medical Centre, Abeokuta, from 1 January 2011 to 31 December 2020.

Study setting

The hospital's family planning clinic operates daily from 8:00 am to 4:00 pm. It is run by trained family planning service providers such as nurses, resident doctors, and consultant gynaecologists in the Department of Obstetrics and Gynaecology. The clinic is run by resident doctors and consultants who attend to cases and manage complications associated with the various contraceptive methods. Bilateral tubal ligations were done in the theatre following the couple's written, informed consent.

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Data collection

Women who visited the family planning clinic and theatre for bilateral tubal ligation between the 1st of January 2011 and the 31st of December 2020 to access contraceptive care were identified from the clinic registers. Their case notes were retrieved, and relevant data such as socio-demographic characteristics, reproductive history, indications for the use, source of information concerning contraception, previous contraceptive use and present contraception of choice were extracted using a standardised proforma.

Data analysis

Collected data were coded and analysed with the statistical package for social sciences (SPSS) IBM version 25.0 (Armonk, NY). Descriptive statistics were computed for all data, and results were presented in tables and charts. Chi-square was used to test for significance, and a p-value < 0.05 was considered statistically significant.

Ethical approval

Ethical approval for the study was obtained from the hospital's Health Research and Ethics Committee (approval number FMCA/470/HREC/04/2023/07). The various unit heads obtained permission to assess the files.

RESULTS

A total number of 3023 women accessed contraceptive services at the family planning clinic of the hospital from 1st of January 2011 to 31st December 2020. Table I shows that the age range of clients was 17-56 years, and the highest percentage (36.3%.) of contraceptive usage was between 30-34 years, whereas 8.2% of women below the age of 25 utilized contraceptive care services. The majority of clients were Christians (72.2%), predominantly had tertiary education (75.9%), and the highest frequency of contraceptive utilization was among clients who had had three deliveries. At the same time, there was no record of any nulliparous women seeking contraceptive services during the period of review. Essentially (93.2%), the clients were married, whereas 0.8% were single. Self-employed women constituted 49.4%, followed by civil servants (43.4%). Homemakers, students and unemployed constituted 3.2%, 3.0% and 1%, respectively. Those who had never used contraceptives were 1519 (50.2%), while 1504 (49.8%) had accessed contraceptive services in the past.

Table I. Socio-demographic characteristics of clients (n = 3023)

	Frequency	Percentage (%)
Age		
< 25	248	8.2
25-29	551	18.2
30-34	1098	36.3
35-39	748	24.7
> 40	378	12.5
Mean Age ± SD	32.95 ± 5.60	
Range	17-56	
Religion		
Christianity	2183	72.2
Islam	833	27.6
Others	7	0.2
Parity		
0	0	0.0
1	325	10.8
2	956	31.6
3	965	31.9
4	475	15.7
≥5	302	10.0
Educational level		
None	180	6.0
Primary	513	17.0
Secondary	35	1.2
Tertiary	2295	75.9
Occupation		
Self-employed	1493	49.4
Civil servants	1312	43.4
Housewives	97	3.2
Students	91	3.0
Unemployed	30	1.0
Marital status		
Single	24	0.8
Married	2818	93.2
Divorced	169	5.6
Separated	12	0.4
Previous use of Contraception		
Yes	1504	49.8
No	1519	50.2

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The association between social demographic characteristics and choice of contraceptives is shown in Table II. The most typical method of contraceptive used by women less than 35 years of age was implant, while IUCD was the most frequently used among those aged 35 and above. There was no client less than 30 years of age who desired IUCD insertion. The least method of contraception used before the age of 30 was the barrier method, while oral contraceptive pills were the least common method after 35 years of age. The relationship between the age of clients and contraceptive methods of choice was statistically significant (p=0.000). The most common method of contraceptive usage among Christians was implant (39.8%); this is closely followed by IUCD (39.7%), while the least used method was BTL. Similarly, among the clients who practiced Islam, the commonly used methods were implants (40.6%) and IUCD (35.7%). There was no record of using the barrier method or desire for BTL among clients who practiced other religions besides Christianity and Islam. The majority, 135(44.7%) of the grand-multiparous women chose IUCD, while none of them used pills. Implants were predominantly used among clients who have had two deliveries, and the relationship between parity and preferred method of contraception was statistically significant (p=0.000). Intrauterine contraceptive device (IUCD) was most popular among clients with tertiary education 972(42.4%). Also, 15 out of 20 clients who desired BTL had tertiary education. Furthermore, the relationship between the education status of clients and the choice of contraceptive methods was statistically significant (p=0.000). In general, the mean duration of contraceptive use for all methods was 3.03 ± 2.35 years.

Figure 1 shows that 2017 and 2019 were the years that recorded the highest rate of contraceptive usage (13.1% and 12.7% respectively). The years with the lowest usage rate were 2011 and 2020 (6.8% and 9.5%).

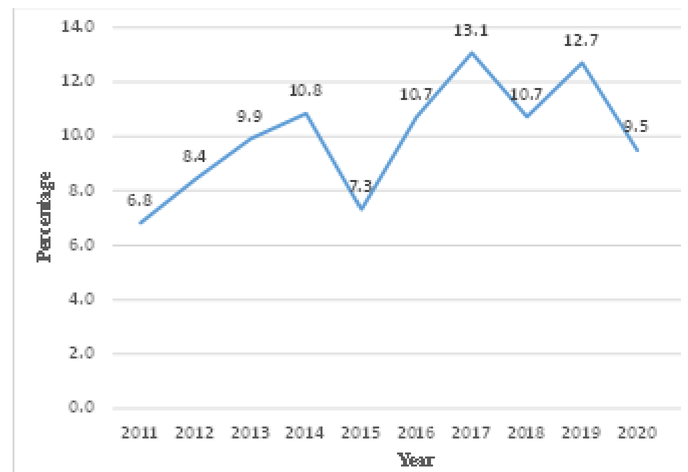

Figure 1. Trend showing percentage attendance to family planning clinics from 2012- 2020

Figure 2 shows that the most common method of contraception used during the study period was implants (40%), particularly Implanon used by 39.6% of these, followed closely by IUCD (38.5%). In contrast, Depo-medroxyprogesterone acetate (DMPA) was the more common injectable used (15.5%), while COCP was the most accepted pill used by the clients (2%). The least method of contraception used was BTL (0.7%).

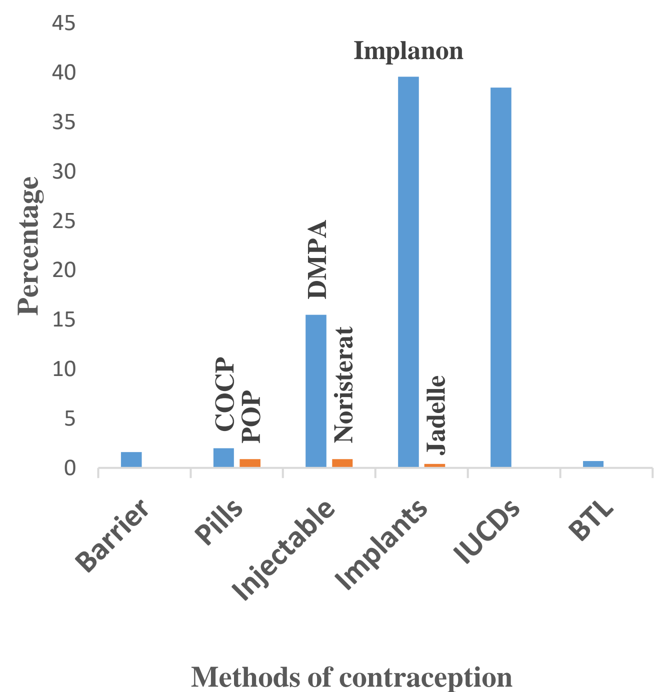

Figure 2. Patterns of contraceptive uptake

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Most of the information about contraception emanated from clinical personnel (71.6%), and the least source of information came from community health workers (1.8%), as illustrated in Figure 3.

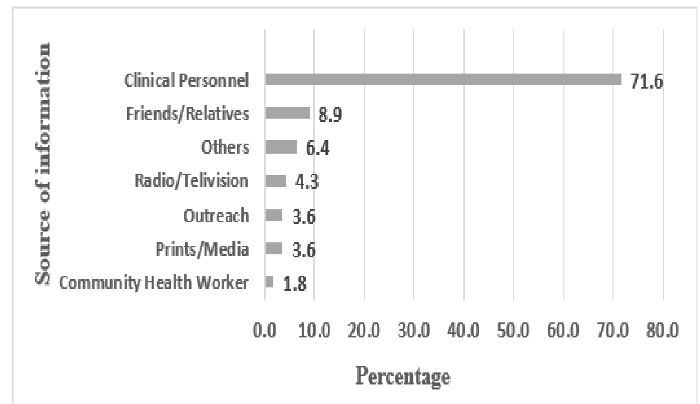

Figure 3. Sources of information on contraception

Table II. Association between socio-demographic characteristics and choice of contraceptives

Variables	Pills	Injectable	Barriers	Implants	IUCD	BTL	Total n (%)	Chi-square	P value
Age (years)									
<25	12 (4.8)	40 (16.1)	4 (1.6)	121 (48.8)	71 (28.6)	0 (0.0)	248 (100.0)	37.855	*0.0001
25-29	20 (3.6)	85 (15.4)	6 (1.1)	239 (43.4)	201 (36.5)	0 (0.0)	551 (100.0)		
30-34	38 (3.5)	200 (18.2)	14 (1.3)	446 (40.6)	395 (36.0)	5 (0.5)	1098 (100.0)		
35-39	7 (0.9)	122 (16.3)	14 (1.9)	290 (38.8)	306 (40.9)	9 (1.2)	748 (100.0)		
>40	5 (1.3)	52 (13.8)	9 (2.4)	114 (30.2)	192 (50.8)	6 (1.6)	378 (100.0)		
Religion									
Christianity	61 (2.8)	333 (15.3)	37 (1.7)	869 (39.8)	867 (39.7)	16 (0.7)	2183 (100.0)	17.048	0.0730
Islam	20 (2.4)	164 (19.7)	10 (1.2)	338 (40.6)	297 (35.7)	4 (0.5)	833 (100.0)		
Others	1 (14.3)	2 (28.6)	0 (0.0)	3 (42.9)	1 (14.3)	0 (0.0)	7 (100.0)		
Parity									
1	26 (8.0)	46 (14.2)	8 (2.5)	115 (35.4)	125 (38.5)	5 (1.5)	325 (100.0)	90.253	*0.0001
2	24 (2.5)	140 (14.6)	14 (1.5)	411 (43.0)	354 (37.0)	13 (1.4)	956 (100.0)		
3	16 (1.7)	178 (18.4)	9 (0.9)	384 (39.8)	376 (39.0)	2 (0.2)	965 (100.0)		
4	16 (3.4)	94 (19.8)	8 (1.7)	182 (38.3)	175 (36.8)	0 (0.0)	475 (100.0)		
≥5	0 (0.0)	41 (13.6)	8 (2.6)	118 (39.1)	135 (44.7)	0 (0.0)	302(100.0)		
Level of education									
None	2 (1.1)	30 (16.7)	5 (2.8)	103 (57.2)	40 (22.2)	0 (0.0)	180 (100.0)	85.994	*0.0001
Primary	9 (1.8)	116 (22.6)	5 (1.0)	235 (45.8)	144 (28.1)	4 (0.8)	513 (100.0)		
Secondary	2 (5.7)	6 (17.1)	1 (2.9)	16 (45.7)	9 (25.7)	1 (2.9)	35 (100.0)		
Tertiary	69 (3.0)	347 (15.1)	36 (1.6)	856 (37.3)	972 (42.4)	15 (0.7)	2295 (100.0)		
Mean duration of use in years (±SD)	2.6 ± 2.2	3.3 ± 2.8	2.4± 2.4	3.0± 2.1	3.0 ± 2.4	-	3.0 ± 2.		

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DISCUSSION

This study has shown an upward trend in the use of contraceptives in our family planning clinic in the last ten years, with most clients being in the reproductive age group, married, educated and multiparous. Implants and intrauterine contraceptive devices (IUCD) were the most preferred contraceptives, while OCPs and bilateral tubal ligation were the least preferred methods. We also reported that age, parity, and level of education were significant determining factors in the uptake and pattern of contraceptive use. Most information on contraceptives came from clinical personnel with a non-encouraging contribution from community health workers and the print/media. The prevalence of previous contraceptive use in this present study was 49.8%. The Federal Government of Nigeria, through the Federal Ministry of Health (FMOH), has set a modern contraceptive prevalence rate (mCPR) target of 27% by 2020.[20] Similarly, the 2014 Kenya Demographic and Health Survey (KDHS) showed that 42% of currently married women in Kwale County were using any contraceptive method. Only 38% were currently using a modern method.[21] Our study found a mean age of 32.95 years, with only 8.2% below the age of 25. This might be attributed to certain socio-cultural factors that impede young unmarried women from seeking contraception for fear of being labeled as "immoral". Similarly, the mean ages of contraception-seekers in Lagos[22] and Osun [23] (both in Nigeria) as well as in Pakistan[24] were 34.3, 34.8 and 32.6 years, respectively, further bolstering the fact that young adults rarely have access to contraception in the relatively conservative societies. Additionally, these figures suggest the likelihood that the peak fertility age and age of contraceptive usage of the study population are between the late 20s and early 30s.[21,22,23,24]

This study found that most of our clients (93.2%) are married. This discovery corresponds favourably to a similar survey in southwest Nigeria, where most clients were married (97.6%).[22,23] Okunade *et al*., opined that this might be because married women were more inclined to seek family planning methods. [22] The motivation might be based on the ever-increasing challenges of raising children and the need to reduce family sizes.[23, 24] In a similar development, this study found a large proportion of the clients to be Para-3 (31.9%) and Para-2 (31.6%), respectively, and this was similar to a survey in South-Western Nigeria, where the majority of the family planning clinic attendees had 2 to 3 parous experiences.[25] Meanwhile, another Nigerian study reported that 80.6% of their clients were multiparous, with 68.9% having between two to four children.[22] Monjok *et al.,* [26] said that most of their clients were Para 2-3 (43.4%), which is slightly higher than what was observed in this study. This may reflect cultural practices, as women with many children have higher social status in south-eastern Nigeria. Thus, the desire for large families plays a significant role in discouraging contraception in such areas.[26]

The 10-year trend among our clients also captured the increasing usage of contraception among educated women. This study observed a progressive upward trend with a peak in the year 2016 (10.7%), 2017 (13.1%), 2019 (12.7%) and a slight dip in 2020 (9.5%). The small drop observed in 2020 might be due to the COVID-19 pandemic and eventual global lockdown. The influence of education on the pattern of utilisation cannot be overemphasised. Educated women adopt modern contraception more than non-educated women in this study, as 75.9% of our clients had tertiary education; this compared with findings in North-central Nigeria, where more women with secondary and tertiary education were found to use modern contraception.[27] It is believed that educated women tend to appreciate the importance and benefits of contraception, such as reduced family size and improved quality of life.[28] It was similar to findings reported by Emina *et al.,* where the use of contraception correlated with the educational level of the women and their husbands.[29]

This study observed that clinical personnel play a significant role (71.6%) in the dissemination of information, and friends and relatives (8.9%) and radio/television (4.3%) were other sources of information to the users of contraception. Chigbu *et al.* [30], Jejeebhoy *et al.* [31], and Ikiaki *et al.*[32] reported that the attitude of health providers, as well as the kind of information towards a particular contraceptive method in developing countries, had been shown to influence the choice of clients. Therefore, there is a need to evaluate the interaction between the contraceptive providers and the clients regularly to improve the unmet need for contraception in Nigeria.[20] The government should also train and re-train the providers as well as subsidise the prices of contraceptives to make them more affordable, thereby improving their uptake.[33]

A breakdown of the current use of various methods showed that implants had the highest prevalence of 39.0%, followed closely by IUCD, with a prevalence of 37.0%. Comparatively, a study in South-Western Nigeria showed that the most common contraceptive method chosen was IUCD,[25] which was similar to yet another report by Ijarotimi *et al* in Ife, Osun State, South-west, Nigeria where Copper-T IUCD was also the most commonly used method of contraception (77.9%), followed by the progestogen-only injectable contraceptives (12.6%), then oral pills (4.1%) and progestin implants (2.3%).[34] Some studies found that long-acting, reversible contraceptives (Implant and IUCD) were preferred by women with higher parity, and this is identical to our findings.[25,26,34] This is also supported by the fact that Implant and Intrauterine contraceptive devices are the most widely used reversible contraceptives in the world, and it has been estimated that over 130 million women of reproductive age were using IUDs for birth control.[31] It thus appears that the IUCD, Implant, Injectable and other long-acting contraception are the methods of choice in clinic-based services in Nigeria. Although this preponderance may be due to the simplicity and convenience of the IUCD for the users, it could also be due to provider bias and the confidentiality of the method once inserted.[29, 34]

In this study, surgical methods such as bilateral tubal ligation were the least-commonly used (0.25%) in our centre over the study period. This is similar to the studies in Nigeria [35,36] and Cameroun [37], where IUDs and implants are among the most commonly used methods of contraception with insignificant desire for sterilization. This can be explained by the increasing preference for more prolonged, reliable yet reversible methods of contraception by women. In addition, our environment frowns at the use of permanent contraception such as tubal ligation and vasectomy due

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to cultural and religious beliefs; therefore, they would prefer to utilise other contraceptive methods whose effectiveness rivals that of surgical sterilisation.[38, 39]

This study has demonstrated that certain factors could predict the use of modern contraception by women; some of the factors elucidated were age ($\chi2$=37.855; p=0.000), increasing parity (χ^2=90.253; p=0.000), and level of education (χ^2=85.994; p=0.000). Hembah-Hilekaan *et al.* [40] in Makurdi, North-central, Nigeria reported that, of all the predictors identified in their study (age, parity and educational status), only age (Beta=1.079) and parity (Beta=0.764) had a significant impact on the choice of contraceptive methods.[40] This should be the starting point to develop a deliberate policy focused on the general population that aims at providing a wide availability of effective modern contraceptive methods to prevent unwanted pregnancies and avoid unsafe abortions, particularly among women in rural areas who are disadvantaged in access to health facilities.[38, 39, 40]

CONCLUSION

This study demonstrated that various factors like age, parity, as well as educational status, could significantly affect contraceptive choices and uptake among women. The clinical personnel predominantly disseminate information regarding contraception. Therefore, there is a need to increase contraceptive information using various media to improve their uptake and collaborate with multiple hospital community medicine departments to improve outreaches and involvement. Furthermore, training of the team covering the family planning unit on appropriate counselling of clients on contraceptive choices and opening of rural sites would boost utilisation of this service, especially by adolescents and young people.

Conflicts of Interest: The authors declare no conflict of interest

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