

Use of combined oral contraceptive pills among teenage girls in Calabar, Nigeria

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Abstract: The objective of this study was to find out about the use of combined oral contraceptive pills by women in Calabar, Nigeria, with a particular interest in single nulliparous teenage women. During the period from 2006 to 2010, a total of 1980 women seen in the University of Calabar Teaching Hospital's family planning unit used various methods of contraception. Of these, 316 (15.96%) used combined oral contraceptive pills. Twenty girls aged between 13 and 19 years accounted for 6.3% of those who used combined oral contraceptive pills. There were 296 (93.6%) women between the ages of 20 and 34 years who accounted for the remaining users. Of these women, 195 (61.5%) were educated to the secondary level, and 34 (10.8%) were educated to primary level. No women without formal education used combined oral contraceptive pills during the period of study. The majority of the users were nulliparous (128; 40.4%); the rest had parity values of at least one to more than four. One hundred thirty-seven (43.4%) of the users were single, 112 (35.4%) were married, and the remaining 67 (21.1%) were separated, divorced, or widowed. There is a growing need to educate young Nigerian women about the use of combined oral contraceptive pills; this medication is suitable and effective for most young women, and it also has additional noncontraceptive health benefits.

Keywords: combined, oral, contraception, pills

Contraception is the use of various devices, drugs, agents, sexual practices, or surgical procedures to prevent conception.¹ It is used for birth control, the spacing of pregnancies, and the limitation of family size.¹⁻³ Contraception has been a very sensitive and controversial subject in traditional African society as a result of the society's inherent barriers to the use of contraception.^{4,5} These barriers include a lack of awareness, a lack of access, cultural factors, religion, an opposition to the use of contraception by sexual partners or family members, and a fear of the health risks and side effects associated with contraceptives.^{6,7} In Nigeria, for example, the attitude of the government toward contraception has changed from lukewarm to rather positive; this resulted in the inclusion of family planning as an integral component of the primary health care delivery system in 1988.⁸ This development has led to an increased awareness and use of various methods of contraception by women in this country.

There are various methods of contraception, including progesterone-only implants, injectable progesterone-only methods, intrauterine contraceptive devices, barrier methods, spermicides, surgical sterilization, oral progesterone-only pills, and combined oral contraceptive pills.⁹⁻¹¹ Combined contraceptive pills first became available during the 1960s.⁹ Since that time, these pills have remained the most common method of contraception used by women aged between 15 and 34 years, especially in the developed

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countries of Europe and America.^{12–14} The combined oral contraceptive pill is essentially made up of an estrogen and a progesterone.

The two most common estrogens that are used in combined oral contraceptive pills are the synthetic products ethinylloestradiol and mestranol.^{15,16} These two estrogens are potent and active when they are taken orally.^{17,18} Scientists have continued to reduce the dose of estrogen in combined oral contraceptive pills; thromboembolism, which is a known complication of combined oral contraceptive pill use, results from the effects of the pill's estrogen component.^{19,20} Thus, there are three categories of combined oral contraceptive pills, which are based on estrogen content: low dose (containing <50 µg of estrogen); medium dose (containing 50 µg of estrogen); and high dose (containing >50 µg of estrogen).^{9,21,22} The reduction in the estrogen component of combined oral contraceptive pills has not been found to decrease the efficacy of the pill.⁹ The progesterone component is usually supplied by norethindrone, levonorgestrel, norgestrel, norethindrone acetate, or ethynodiol diacetate. Newer progestones that are less androgenic have also been introduced; these include norgestimate, desogestrel, and gestodene.^{15,16,23} Combined oral contraceptive pills are packaged as monophasic or phasic oral contraceptives.^{9,21}

The combined oral contraceptive pill is very effective, although efficacy depends on compliance with the treatment regimen.^{24,25} It is essential for the user to be well motivated and to remember to take the pill every day. Failure rate ranges from less than 1 per 100 women-years to more than 15 per 100 women-years.²⁴ Again, this rate depends on user compliance.^{24,26} The pills are affordable, with a short recovery interval, and inadvertent use during early pregnancy is not known to be teratogenic.²⁷ Long-term use is associated with improved iron reserves, minimal menstrual blood loss, and regular and predictable menstrual cycles.^{2,11,12}

Combined oral contraceptive pill use is also associated with the relief of dysmenorrhea, the correction of dysfunctional uterine bleeding, and the amelioration of the course of rheumatoid arthritis.^{11,12,28} It is also known to protect women from pelvic inflammatory disease, ectopic pregnancies, and endometriosis. Long-term use helps to prevent the development of epithelial ovarian and endometrial carcinoma. The pills also protect users from benign breast diseases like fibroadenoma and fibrocystic breast disease.^{22,29} However, there is a small risk of hepatic adenoma among long-term users, a slight risk of breast carcinoma among predisposed women who are also taking the pill, and perhaps a small risk of squamous carcinoma of the cervix among long-term users.²⁹

Combined oral contraceptive pills are contraindicated for pregnant women, women who smoke, and women who are 35 years old or older. The use of these pills is also contraindicated for women with previous thromboembolism, cardiovascular disease, or chronic liver disease. Most side effects of the pills are self-limiting. Treatment is often better tolerated if proper counseling precedes the commencement of the pills.^{17,30}

The level of use of contraception among sexually active women in developing countries is generally low, especially in Africa. This is due to a prevailing lack of information as well as cultural and religious barriers.^{31–33} Several studies in different parts of Nigeria have shown a very low utilization rate that ranges from 5.3% to 20%.^{34,35} However, from 1990 to 2008, Nigeria's national contraceptive prevalence rate increased from 6.0% to 14.6%.³⁶ The Nigerian demographic health survey of 2008 showed that the median age at first sexual intercourse was 17.8 years for women between the ages of 20 and 49 years.³⁶ In addition, although 28% of women between the ages of 45 and 49 years had their first instance of sexual intercourse by the age of 15 years, only 15% of women who are currently 15 to 19 years old have experienced the same.³⁶ The problems that result from a low level of contraception use and increased sexuality are both numerous and formidable.³⁷

The objective of this study was to determine the level of use of combined contraceptive pills among young teenage sexually active women in Nigeria.

Materials and methods

The setting of the study is Calabar, Nigeria, which is the capital of Cross River State. Calabar has an estimated population of 371,022, with women accounting for 184,415 (49.7%) of the population. The area hosts one teaching hospital, a general hospital, and numerous private clinics. The records of clients who used various methods of contraception during the study period of January 1, 2006, to December 31, 2010, at the family planning unit of the maternity annex of the University of Calabar Teaching Hospital were reviewed. During this period, 1980 women used various methods of contraception, and 316 (15.9%) of these women used combined oral contraceptive pills. The records of clients who used these pills were selected for in-depth study. The research protocol fulfilled the criteria for approval by the research ethics committee. The demographic data and the contraceptive use of these women were analyzed with the use of the Epi Info statistical software package (version 3.5.1; Centers for Disease Control and Prevention, Atlanta, GA).

The parameters used for the analysis were the proportion of teenagers who used combined oral contraceptive pills per year, the age group of the users, the educational status of the users, and the parity and marital status of the users. The results obtained are displayed in Tables 1–5.

Table 1 Yearly distribution of combined oral contraceptive pill use per year and teenage usage

Years	No. of teenagers	Total no. of users	Percentage per year of teenagers
2006	2	56	3.6
2007	5	60	8.3
2008	4	86	4.6
2009	3	64	4.7
2010	6	50	12.0
Total	20	316	6.4

Table 2 Age distribution of users of combined oral contraceptive pills

Age group (years)	No. of users	Percentage (%)
<15	4	1.3
16 to 17	6	1.9
18 to 19	10	3.2
20 to 34	296	93.6
Total	316	100

Table 3 Educational status of users of combined oral contraceptive pills

Level of education	No. of users	Percentage (%)
No formal education	0	0.0
Primary education	34	10.8
Secondary education	195	61.5
Tertiary education	87	27.7
Total	316	100

Table 4 Parity of users of combined oral contraceptive pills

Parity	No. of users	Percentage (%)
0	128	40.4
1	74	23.5
2	54	17.0
3	32	10.3
>4	28	8.8
Total	316	100

Table 5 Marital status of users of combined oral contraceptive pills

Marital status	No. of users	Percentage (%)
Single	137	43.4
Married	112	35.4
Separated	23	7.3
Divorced	17	5.4
Widowed	27	8.5
Total	316	100

Results

During the period of study at the Family Planning Unit of the Maternity Annex of the University of Calabar Teaching Hospital, Calabar, the 1980 women studied used various methods of contraception, which included Norplant, Implanon, injectable progesterone-only methods, intrauterine contraceptive devices, condoms, bilateral tubal ligation, and combined oral contraceptive pill. Norplant consists of six flexible, silastic, nonbiodegradable subdermal implants, each containing 36 mg levonorgestrel with an efficacy of 5 years. It was developed by the Population Council, Inc (New York, NY) and first used in Finland. Implanon (Merck & Co., Inc, Whitehouse Station, NJ) is a single, nonbiodegradable subdermal implant containing 68 mg of etonogestrel with an efficacy of 3 years. Three hundred sixteen (15.9%) of these women used the combined oral contraceptive pill, and teenagers accounted for 20 (6.4%) of those women who used combined oral contraceptive pills. Women aged between 20 and 34 years accounted for 296 (93.6%) of users. Eighty-seven (27.7%) users were educated to the tertiary level, 195 (61.5%) were educated to the secondary level, and 34 (10.8%) were educated to the primary level. A total of 128 (40.4%) users of combined oral contraceptive pill were nulliparous, whereas the remaining 59.6% had a parity value that ranged from one to more than four. One hundred thirty-seven (43.4%) of the users were single, 112 (35.4%) were married, and the remaining 67 (21.3%) were separated, divorced, or widowed. See Tables 1 through 5 for a more detailed breakdown of this information.

Discussion

The University of Calabar Teaching Hospital is the foremost center for contraceptive counseling and service provision in Cross River State, Nigeria. This study has shown that the use of contraception by women in this community is low. An average of only about 396 women used contraceptive each year during the period under review. However, the low utilization rate is consistent with that of other studies performed in various parts of Nigeria, which showed a utilization rate of between 5.3% and 20%.^{34,35} This is even more understandable when one considers the national contraceptive prevalence rate of 14.6% in 2008.³⁶

This picture is in contrast with the rate of contraception use in the developed countries of Europe and America, where more than 90% of women who wish to avoid pregnancy have used a method of contraception.³⁴ The majority of the women in this study who used contraception during the period under review were less than 35 years old, and only 15.9% of them used combined oral contraceptive pills. Perhaps this trend is

also being seen in other health care centers in Nigeria. In the United Kingdom, combined oral contraceptive pills are the most common method of contraception, with condoms being a close second.¹¹ Various studies in the six geopolitical zones of Nigeria have indicated that the main sources of contraceptives, in decreasing order of frequency, are patent medicine stores; pharmacy shops; friends, siblings, or partners; and health facilities.^{31–33} The low level of use of combined oral contraceptive pills by young women in this country is probably the result of a low level of awareness, misconceptions about the pill, and a lack of adolescent-friendly reproductive health services.⁷

Oral contraceptive pills – like condoms – are readily available over the counter at patent medicine stores and pharmacy shops in Nigeria; they are also available at health care facilities. These pills are the second contraceptive method of choice for women of reproductive age, particularly for younger unmarried females and students.³⁶ A significant problem in Nigeria is a general lack of adequate information about oral contraceptive pills. The myth that prolonged use of these pills leads to permanent sterility has limited their use in Nigeria, and it may explain why most young females in Nigeria – especially students – prefer abortion to contraception for unwanted pregnancy.⁶ In addition, the protective effects of oral contraceptives are virtually unknown by the majority of Nigeria's female population.³⁸ This may explain why the proportion of women who used these drugs was low (eg, <10% of teenagers).

Among the health care facility sources, the availability of contraceptive pills is higher at private clinics as compared with government family planning and maternal health clinics or hospitals.^{5,8–10} In addition, more married than single women receive contraceptives from the government-run health facilities, including hospitals.^{7,31–33} This may be the reason that the proportion of unmarried teenagers who used oral contraceptives was so low in this study; these individuals may feel that public or government-run facilities do not provide sufficient privacy or a friendly enough atmosphere. The main reason for this unfriendliness is rooted in the cultural fabric of Nigerian society, where many people still regard family planning services as being within the purview of married couples.^{6,7,31–33} In addition, discussions about sex and contraception with young people are still considered inappropriate in Nigeria, even among health care workers.^{6,7} Therefore, there is a great need in Nigeria to promote youth-friendly reproductive services to encourage sexually active young people to increase their contraceptive use. However, this must begin with the mass education of the adult population to change the cultural norms about sex education during adolescence.

The majority of the clients in this study had been educated to the secondary level. This is significant, because educational level is an important factor that affects contraceptive awareness and use. In addition, the proper use of the pill requires a high level of motivation on the part of the user. This motivation is essential, because the efficacy of the pill depends largely on compliance with the treatment regimen. Most of the users of combined oral contraceptive pills were of low parity. This may be related to the fact that women with high parity have many domestic concerns that may interfere with compliance; many of these women tend to opt for methods that are not client dependent (eg, injectable progesterone-only methods, intrauterine contraceptive devices, implants).

Conclusion

The use of contraception by women in Nigerian society is low. Only a small percentage of teenage girls use combined oral contraceptive pills, despite their suitability, high efficacy, and numerous health benefits for this population. Therefore, there is a strong need for increased awareness and use of contraceptive pills among sexually active teenage girls in Nigeria.

Disclosure

The authors report no conflicts of interest in this work.

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