

Women's Choice, Satisfaction, and Compliance with Contraceptive Methods in Selected Hospitals of Ibadan, Nigeria

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ABSTRACT

Background & aim: Population control has remained an issue of concern to many developing nations. Many women have unmet needs for contraception. Despite the available options for abortion, unwanted pregnancies account for a high maternal mortality rate. Regarding this, the present study aimed to investigate the choices, satisfaction, and compliance with contraceptive use among the women living in Ibadan, Nigeria.

Methods: This cross-sectional study was conducted on 290 women attending the pediatric welfare clinics in four hospitals in 2015. The study population was selected through purposive sampling technique. The data were collected using a self-administered questionnaire. The data were analyzed using descriptive statistics and Chi-square test through SPSS, version 16.

Results: According to the results, 95% of the participants were aware of the contraceptive methods, and 72.1% of them had used these methods. Partner's refusal was the major reason for non-use of contraceptives. The birth control methods, which were commonly utilized, were natural family planning (36.5%) and oral contraceptives (30.8%). Furthermore, up to 60% of the subjects were satisfied with the method they used, and 70% of them adhered to the chosen methods. Additionally, compliance with contraceptive methods had a significant association with partners' approval ($P=0.038$) and satisfaction with contraceptive methods ($P=0.04$).

Conclusion: As the findings of the present study revealed, partners' approval of contraceptives had a significant role in the use of the birth control methods. Furthermore, some women were not satisfied with the methods they used. Regarding the findings of the study, the partners should be involved and well informed about contraceptives in order to enhance their use of contraceptives. Moreover, the women should be provided with appropriate information to be able to make an informed decision for choosing the suitable contraceptive methods.

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Introduction

Maternal mortality during childbirth is a global concern (1). This event mainly occurs in less developed nations; accordingly, approximately 302,000 (99%) of the global maternal mortality happened in these regions in 2015. Based on the statistics, sub-Saharan Africa recorded 201,000 (66%) cases of maternal

mortality, whereas Southern Asia had 66,000 cases in this regard (2). The world's total fertility rate has dramatically dropped from five children per woman in the early 1950s to 2.5 children per woman. This is largely owing to the growing use of modern contraceptives, especially in the developed world.

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Europe has the lowest fertility of 1.6 children for each woman, while Africa still has the topmost fertility of 4.7 children per woman (3). According to the 2013 Nigeria Demographic and Health Survey (4), the prevalence of maternal mortality due to childbirth in Nigeria is approximately 576 cases per 100,000 live births. The risk of maternal mortality can be lessened using reliable modern contraceptive methods (4). The contraceptive prevalence in Nigeria has remained very low (15%), while the fertility rate of 5.7 children per woman has not changed (4, 5).

Although the couple's awareness of contraceptive methods has been raised, there are still various religious and cultural practices, which constrain the use of these methods in the developing countries. These religious and cultural practices include early marital age of female, desire for large families and male children, and some misconceptions about contraceptive use (6). An "ideal" contraceptive has been defined as "100% effective, completely safe, and not related to coitus with minimal need for frequent replacement and facilitation of speedy return to fertility after suspension (7).

Family planning is a feasible effort made by a couple to curtail the number of children they want through the use of contraceptive methods (5). Despite the growing awareness of the child spacing benefits and its tactical role in reducing maternal and neonatal mortality, the acceptance and utilization of contraceptive methods is still at a low level, particularly in unindustrialized nations (8). More than 200 million women in the developing countries would like to postpone their subsequent gestation or even stop having offspring (4). Nonetheless, many of these females still utilize the traditional and less effective methods of contraception or use no method at all (9).

Contraception methods can be divided into two categories, namely traditional and modern methods. The selection of the appropriate method has been described as one of the six elements regarded as critical to the quality of care in family programs, which will lead to improved initial acceptance and sustained use (10). Sometimes, the women's choice, compliance, and consistency of contraceptive use are affected by some reasons beyond

benefits, satisfaction, and level of side effects (11). Up to 50% of the women using contraceptives are not fully satisfied with the methods they use due to their real or anticipated adverse effects, complexity, unknown reliability, and decreased pleasure during sexual intercourse (12).

The women who are not totally pleased with their chosen contraceptive methods may not fully comply with it. This issue results in error or nonuse of the method, thereby increasing the chances of unplanned conception (13). Successful use and compliance with family planning methods are strongly associated with the woman's satisfaction (14). The frequency of contraceptive use has universally risen as a result of the advancement in the modern contraceptives and the institution of structured family planning programs (12).

The traditional methods that are currently used by the women in Nigeria for the prevention of postcoital conception include ornaments like waist beads that are rubbed with herb and worn to prevent pregnancy, and also oral and vaginal potions (15). The percentage of the Nigerian women utilizing contemporary contraceptives increased from 3% in 1990 to 8% in 2003 (16). According to Abiodun and Balogun (17), awareness about family planning has remained consistently high in Nigeria over the past five years.

In this regard, 97% of the women within the age of 15-49 years have heard about at least one method of contraception. Furthermore, 52% of the women who are presently married have reported to make use of a contraceptive method at one time in their life. In addition, the most common methods among the married women were the injectable contraceptives, pills, and rhythm method. Various reports have used the tolerability of methods to rate continuity or stoppage of contraceptive use; in other words, they estimate the proportion of the mothers, who carry on or halt using a method after six months or one or more years (18). Lete et al. (19) demonstrated that the avoidance of daily use of contraceptives improved compliance in the typical users.

The improvement of the reproductive health in the young women living in the developing countries requires access to safe and effective

methods of fertility control. Nonetheless, most of the people rely on traditional rather than modern contraceptives, such as condoms or oral/injectable hormonal methods (12). In a study conducted by Isah and Nwobodo in Nigeria (20), the practice rate of family planning was reported to be still at a low level in this community.

Contraceptive effectiveness greatly relies on the intrinsic efficacy of these methods and their accurate utilization. It is not easy to determine the regular effectiveness of the contraceptives. Furthermore, as reported by Adegbola and Ogedengbeeven, faultless application of these methods may not lead to zero failure rate (21). Women's choice of various family planning approaches depend on their perceptions concerning the prevention of conception, health care workers, familiarity with various methods of contraception, socioeconomic status, and spouse's characteristics (22).

Parkes et al. (23) reported that convenience and usefulness are the factors affecting the selection of contraceptive methods by the women. They also indicated that the presentation of various appropriate methods automatically enhanced the utilization of contraceptives. According to the mentioned study, 88.5% of the females were found to be satisfied with their chosen contraceptive methods.

Spouses' attitudes and decisions influence contraceptive choices; accordingly, the women who infrequently discuss with their partners about the prevention issues are less likely to use contraceptives regularly (24). In addition, in a study carried out by Hatcher et al. (25), the mainstream of the women stated that they required partner's consent before using the birth control methods. The frankness and open conversation about contraceptive practice are discountenanced in some cultures. Moreover, the inaccessibility of contraceptives and information inadequacy about family planning escalate the hazard of unintended conception among the women (25).

Women's satisfaction with family planning services is a significant factor for the sustained use of these methods. According to Bruce (21), satisfaction with services entails six elements of qualities, including choice of methods, information given to clients, technical

competence, interpersonal relations, and mechanisms encouraging continuity and appropriate constellation of services. With this background in mind, this study was conducted to examine the choices, satisfaction, and compliance with contraceptive methods among the women in four health facilities in Ibadan, Nigeria.

Materials and Methods

This descriptive cross-sectional study was conducted on 290 women attending the pediatric welfare clinics in four hospitals, including University College Hospital, Adeoyo Maternity Hospital, Jericho Nursing Home, and Jaja Clinic in Ibadan in 2015. The study population was selected out of 1000 cases, using purposive sampling technique.

Considering the total number of the women referring to the four selected health facilities and were accessible, Araoye Formula ($n = \frac{N}{1+N(e)^2}$) was used for the sample size calculation (26). The sample size was estimated as:

$$\text{sample size } (n) = \frac{\text{Total Population } (N=1000)}{1+\text{Total Population} \times \text{error tolerance } (e=0.05)^2} = 290$$

The women with the previous history of using modern contraceptives and at least one delivery were included in the study. On the other hand, the subjects who planned to be pregnant soon or those who were pregnant, as well as the women who were not eligible to use contraceptives were excluded from the study. The research approval was obtained from the Ethics Committees of the University of Ibadan/University College Hospital Ethics Committee, College of Medicine, and University of Ibadan (No: NHREC/05/01/2008a). The respondent's informed consent was also sought, and participation was based on voluntary basis. Before responding to the research instruments, the study objective was explained to the participants. Furthermore, they were assured about the confidentiality and anonymity of their data.

In order to ensure reliability, a self-administered questionnaire was utilized for data collection. The questionnaire was developed by the researcher using related

peer-reviewed articles. This instrument consists of four sections, including yes-no questions, where yes is rated as '1', and no is assigned a value of '0'. In this questionnaire, the level of satisfaction is estimated using a four-point Likert scale (very satisfied=3, satisfied=2, fairly satisfied=1, not satisfied=0)

A test-retest was performed with a reliability coefficient of 0.86. The data were collected within six weeks by the researcher with the assistance of four trained nurses. The data were analyzed using descriptive statistics, such as frequency and percentage, and Chi-square test through SPSS, version 16.0.

Results

Sociodemographic Characteristics of Respondents

According to the results, 111 (38.3%) and 104 (35.9%) participants were within the age ranges of 30-34 and 35-39 years, respectively. Furthermore, regarding the marital status, 253 (87.2%), 13 (4.5%), 12 (4.1%), and 12 (4.1%) were married, divorced, separated, and single, respectively. In terms of the religious affiliation, 153 (52.8%), 75 (25.9%), 26 (9.0%), 32 (11.0%), and 4 (1.4%) respondents were practicing Islam, Roman Catholicism, Protestantism, Pentecost, and African traditional religion, respectively. Additionally, the highest educational level attained by most of the respondents (95 [32.8%]) was junior high school. The sociodemographic characteristics of the respondents are presented in Table 1.

Awareness and Choice of Contraceptive Methods

As indicated in Table 2, the majority of the respondents (273 [94.1%]) had heard about contraceptives. In this regard, 83 (30.4%), 61 (22.2%), 45 (16.5%), and 43 (15.8%) participants heard about these methods through health care workers, friends and relatives, television, and radio, respectively as seen in Figure 1. Furthermore, while 209 (72.1%) subjects stated that they used contraceptive methods, 81 (27.9%) respondents reported to use no birth control methods.

The methods commonly used by the current contraceptive users included oral contraceptives,

intrauterine device (IUD), withdrawal method, and vaginal ring as reported by 64 (30.8%), 41 (19.4%), 20 (9.5%), and 8 (3.8%) cases, respectively.

Table 1. Demographic characteristics of respondents

Variables	Frequency (%)
Age	
25-29	62 (21.4)
30-34	111 (38.3)
35-39	104 (35.9)
40>	13 (4.3)
Marital status	
Single	12 (4.1)
Married	253 (87.2)
Divorced	13 (4.5)
Separated	12 (4.1)
Religion	
Islam	153 (52.8)
Catholic	75 (25.9)
Protestant	26 (9.0)
Pentecostal	32 (11.0)
African Religion	4 (1.4)
Education level	
No formal education	9 (3.1)
Basic education	54 (18.6)
Junior high school	95 (32.8)
Senior high school	50 (17.2)
Academic	78 (26.9)

Out of the 81 (27.9%) respondents, who had never used contraceptives, 28.9%, 24.7%, 16%, 9.6%, and 6.2% of them attributed their non-use of contraceptives to their partners' refusal, inability to get pregnant, fear of side effects, cost, disparity with religious beliefs. Additionally, 16% of the participants perceived the use of these methods as unnecessary.

Moreover, 157 (54.3%) subjects often discussed with their partners about contraceptive methods, whereas 13.1% of them never discussed this issue. As the results revealed, 218 (86.5%) participants claimed that their husband agreed with the use of contraceptive methods, while 34 (13.5%) women reported that their husbands did not support using these methods.

Table 2. Respondents' awareness and choice of contraceptive methods

Awareness and choice of contraceptive methods	Frequency (%)
Aware of contraceptives	
Yes	273 (94.1)
No	17 (5.9)
Ever used any contraceptive method	
Yes	209 (72.1)
No	81 (27.9)
Method utilized	
Oral contraceptives	64 (30.8)
Vaginal ring	8 (3.8)
Intrauterine contraceptive device	41 (19.4)
Withdrawal method	20 (9.5)
Natural family planning method	76 (36.5)
Reasons for not using any method	
Fear of side effect	13 (16)
Not necessary	13 (16)
Cannot get pregnant	20 (24.7)
Against religious belief	5 (6.2)
Partner will not allow	23 (28.4)
High cost	7 (8.6)
Discussed contraceptive method with partner	
Never	42 (14.5)
Once	58 (20.1)
Twice	32 (11.1)
Often	157 (54.3)
Partner's approval for contraceptive method	
Yes	218 (86.5)
No	34 (13.5)

Women's satisfaction with chosen contraceptives convenience

As shown in Table 3, a large percentage of the respondents were satisfied with their choice of contraceptive method. More than 80% of the women were satisfied with their chosen birth control method in terms of the convenience level, few side effect, easiness of its

incorporation into lifestyle, application, partner's acceptance and convenience, unplanned pregnancy prevention, menses regulation, accessibility, availability, and reliability. The respondents were also satisfied with providers' attitude while providing care as well as the motivation induced by the providers.

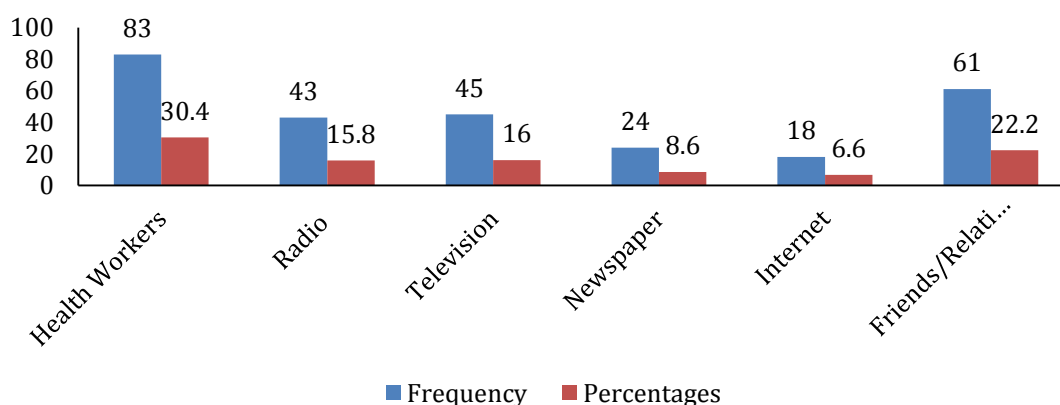
**Figure 1.** Respondents' sources of information on contraceptives

Table 3. Women's satisfaction with chosen contraceptives

Items	Very satisfied (%)	Satisfied (%)	Fairly satisfied (%)	Not satisfied (%)
Level of convenience	136 (46.9)	140 (48.3)	14 (4.8)	0 (0.0)
Fewer side effect	84 (29.0)	169 (58.3)	23 (7.9)	14 (4.8)
Easiness to incorporate method into lifestyle	108 (37.2)	150 (51.7)	32 (11.1)	0 (0.0)
Method use	97 (34.0)	135 (46.7)	56 (19.3)	0 (0.0)
Partner's tolerance of method	131 (45.2)	89 (30.7)	55 (18.9)	15 (5.2)
Preventing unplanned pregnancy	99 (34.1)	159 (54.8)	32 (11.1)	0 (0.0)
Regulating menses	89 (30.6)	145 (50.0)	33 (11.5)	23 (7.9)
Accessibility	108 (37.3)	137 (47.2)	45 (15.5)	0 (0.0)
Provider's attitude	106 (36.5)	151 (52.1)	27 (9.3)	6 (2.1)
Availability	81 (27.8)	147 (50.8)	62 (21.4)	0 (0.0)
Motivation from provider	87 (29.9)	147 (50.8)	56 (19.3)	0 (0.0)
Reliability	89 (30.6)	177 (61.1)	19 (6.7)	5 (1.6)

Level of compliance and factors affecting compliance with contraceptives

According to Table 4, the participants adhered to their selected contraceptive method as 65.2% of the women used their chosen method regularly. However, 101 (34.8%)

subjects did not regularly utilized their method of choice. Furthermore, 85.1% of the women stated that the continuity of a particular contraceptive choice would not affect their compliance, while 14.9% of them affirmed the effect of continuity on their compliance.

Table 4. Level of compliance and factors influencing compliance with contraceptive method among the participants

Statements	Yes	No
Regularly use contraceptive method of your choice	189 (65.2)	101 (34.8)
Have any reason to interrupt the contraceptive method you chose	104 (35.7)	186 (64.3)
Keep regular appointment	247 (85.1)	43 (14.9)
Intend to continue with current contraceptive choice	247 (85.1)	43 (14.9)
Use the method as prescribed will enhance its effectiveness	276 (95.2)	14 (4.8)
Pregnancy will be prevented with adherence to current method	240 (96.8)	8 (3.2)
Satisfaction with current methods will enhance continuous use	240 (96.8)	8 (3.2)
Partner's approval will enhance continuous use	224 (90.3)	24 (9.7)
Religious commitment will not allow me to continue with method	69 (27.8)	179 (72.2)
Alternative choices will not allow me to continue with method	83 (33.5)	165 (66.5)
Cultural beliefs will discourage continuous use	78 (31.5)	170 (68.5)
Fear of side effects	167 (67.3)	81 (32.7)

Table 5. Relationship of compliance with contraceptive methods with partners' approval and satisfaction with method

	Compliance		X ²	df	P-value
	Not complied	Complied			
Partner's approval					
Yes	69 (31.8)	148 (68.2)	4.3	1	0.038
No	17 (50.0)	17 (50.0)			
Satisfaction with method					
Not Satisfied	34 (40.0)	75 (44.1)	6.82	1	0.04
Satisfied	51 (60.0)	95 (55.9)			

Most of the respondents (90.3%) acknowledged that their partners' approval would enhance their continuous use of their choice. The results of the Chi-square test

showed a significant association between partners' approval and compliance with contraceptive methods (P=0.038). In addition, there was a significant association between satisfaction with birth control method and

compliance with contraceptive methods ($P=0.04$) (Table 5).

Discussion

More than 85% of the respondents were married. In line with the purpose of the study, all the selected women were within the childbearing age. As the findings of the study indicated, almost all the women (95%) had heard about the concept of contraception. This is consistent with the assertions that knowledge on family planning has remained consistently high in Nigeria over the past five years. Accordingly, 97% of the women within the age of 15-49 years were reported to be aware of at least one method of contraception (17).

Yet, the number of the Nigerian women utilizing the contemporary family planning methods only increased from 3% in 1990 (16) to 15% in 2013 (4). In the present study, the majority of the women (36.5%) primarily utilized natural family planning method. Based on the report of the 2013 Nigeria Demographic Health Survey, although up to 15% of the women in Nigeria use contraceptives, only 10% of them have ever used modern birth control methods (4), which is probably due to the fear of side effects.

Pills and male condom (6) have been reported as the most popular contraceptive methods. The frequent use of these methods may be due to the fact that they are effective, reliable, cheap, and readily available. Furthermore, they were more advertised among the young married women that constituted the bulk of the respondents in this study. Additionally, the popularity of the condom can be ascribed to its dual function as a means of preventing sexually transmitted infections and also as a family planning method.

In the present study, the majority of the respondents were satisfied with their method of choice. This is in line with the assertion that contraceptive choice is critical to the quality of care in family program and leads to improved initial acceptance and sustained usage (10). According to Aisien, satisfaction with the contraceptive method is very crucial to the use of these methods (13). In the mentioned study, the women who were not fully satisfied were reported to have more errors and stop the method, which increased the risk of accidental conception.

Up to 65.5% of the respondents used their

chosen contraceptive methods, and 85% of them kept to their regular contraceptive clinic follow-up appointments. This was indicative of the respondents' high compliance level with their method of choice. In a same vein, the participants showed a high compliance with the method of contraception they adopted. The participants had the highest compliance with vaginal ring, whereas the withdrawal method had the lowest compliance. In a study conducted by Lete et al. (19), non-compliant behaviors were recorded by 71%, 32%, and 22% of the women using pills, patch, and ring, respectively.

According to the participants of the present study, the factors affecting their choice of contraceptive method included pregnancy, partners' approval, religious commitment, and fear of side effects. However, other factors, such as continuity of using a particular method and cultural beliefs, did not affect their choice of contraceptive methods. This is in line with a study conducted by Baig (27), reporting that the majority of the respondents (1,020 [93%]) reported that husband's approval for birth control use was very essential, revealing the effectiveness of this factor in their choice of contraceptive method.

The present study can serve as a means to assess the individual's opinions on contraceptive methods. Furthermore, it can help determine the factors affecting contraceptive choice and utilization. This study can also enhance the conceptualization of the factors that promote compliance with chosen contraceptive methods.

One of the limitations of the current study was the investigation of only four selected health facilities and its reliance on self-report. Furthermore, the sample size was 290 cases, which is small, compared to the population of the women living in Ibadan.

This study examined the women's choice, satisfaction, and compliance with contraceptives. To provide high-quality care regarding contraceptive choice, the health providers must identify various factors contributing to the proper selection of birth control methods. Accordingly, they should respect clients' meaning of satisfaction and various factors affecting their satisfaction so as to enhance compliance with the chosen method. It is also essential for the nurses to realize the impact they have on patient's

education, decision making, and ultimate compliance with contraceptive methods.

Conclusion

This study was carried out among the childbearing women living in Ibadan to determine their compliance and satisfaction with their chosen contraceptive method. Based on the findings of the study, the main factors affecting the choice of family planning method were the fear of side effects, husbands' approval, and religion, having a significant association with adherence to the use of contraceptive methods. Regarding this, the use of the religious leaders' assistance in the campaign targeting toward the improvement of modern contraceptive method usage seems necessary.

The mass media should also be encouraged to be more active in public enlightenment by informing the people about the benefits of modern contraceptives. Moreover, the health workers should not rest on their oars since they are a principal source of information to the women in this regard. In the less developed countries like Nigeria, which have a patriarchal system with the masculine gender being assigned leading roles in the family decision making, the family planning programs may not be effective without men's involvement. As a result, effort has to be made by the policy makers towards the involvement of the males in these programs.

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Conflicts of interest

All the authors declare no conflicts of interest.

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