



FAMILY PLANNING AND CONTRACEPTIVES: PERCEPTION OF DISCOMFORTS

¹Hannatu Wandaje, PhD

¹Federal College of Education, Yola

²Bala P. Bulus

²Federal College of Education, Yola

³Anthony J. Ukwumonu

³Federal College of Education, Yola

Abstract:

It remains unclear what proportion of women experience discomfort among those who use contraceptive methods, as well as which specific contraceptive methods are associated with side effects, leading to misconceptions and perceptions about contraceptive methods and contributing to the unwillingness to use contraceptives despite being generally aware of contraceptive methods. The research objectives were to determine the criteria for administering contraceptives and the accompanying tests, explore the reasons behind the varying reactions of women to contraceptives, and investigate the potential correlation between inconveniences related to contraceptive usage and blood group type. The primary data used consisted of 200 married women from five selected primary health care centers in Yola, North Adamawa State, Nigeria, who volunteered to use various contraceptive methods. The contraceptive methods administered include Jadelle, Exluton, Implanon, Sayana, Noristerat, Levonorgestrel, Microlut, and Depo-Provera. Both qualitative and quantitative methods were employed, involving thematic analysis of relevant documents and interviews for data analysis. Blood group testing is not considered a criterion before administering contraceptive methods. Of the participants, 106 women did not experience any discomfort, while 68 women experienced discomfort with all the methods administered. Discomfort experienced by women was analysed based on their blood groups, revealing that certain discomforts were more prevalent among specific blood groups for different contraceptive methods. The results indicate that the majority of women using contraceptives do not experience discomfort. However, for those who do, the nature of discomfort varies across different methods and blood types. Thus, the unwillingness to use contraceptives can be attributed to the negative perceptions of a few women who experienced discomfort, the spread of misconceptions about contraceptives and thereby the discouragement of other women based on their experiences.

Key words: **family planning, contraceptive, and perception**

1. INTRODUCTION

Family planning is as old as childbearing and is an integral part of the family system. Some couples meticulously plan and decide on the number of children they wish to have, the spacing between their children's ages, and when to start having children immediately after their wedding. For some couples, the idea arises from having an increased number of children and the challenge of properly spanning their ages. Achieving birth control and proper child spacing requires effort and consideration of the myths surrounding childbearing.

Cultural and religious myths play a significant role in childbearing, especially in developing countries such as Africa. A common religious myth is that children are a blessing from God, and the number of children one bears is immaterial because it is believed that God, who bestows them upon humans, will take care of them. This myth often leads to some parents having so many children that they struggle to recognize or call them by their names.

Cultural myths often give more credence and respect to male children than to female children. This becomes an issue when a couple consistently has only female children. According to cultural beliefs, men in the family are responsible for maintaining and expanding the family name. Consequently, the more male children a family has, the larger and more prestigious the family is considered. These cultural beliefs often encourage practices such as polygamy, as men are encouraged to marry multiple wives to increase the number of male children. As a result, the number of children in a family is often perceived as directly proportional to its productivity.

However, both cultural and religious myths do not always align with reality. Many couples raise children without providing adequate care, discipline, or training, which can result in unproductive members of society. Children may not have access to quality education, perpetuating cycles of poverty and societal challenges. The realization that having many children without providing adequate support and care can lead to negative outcomes has shifted the narrative. Couples are now increasingly conscious of utilizing family planning methods, both natural and modern, to plan their families more effectively.

Compared with hormone-based contraception methods, natural family planning (NFP) methods have garnered acceptance among certain couples due to their perceived effectiveness and minimal interference with a woman's menstrual cycle [4]. They opined that despite their efficacy, challenges arise. Men may struggle with withdrawal, potentially leading to unintended pregnancies, while women may encounter difficulties in accurately tracking fertility and infertility periods. This lack of understanding contributes to the reported inconveniences of NFP methods [12]. Education on fertility patterns is crucial for effective NFP utilization, yet its absence remains a longstanding issue for NFP proponents.

Contraceptive usage serves as a straightforward method for birth control in contemporary society, serving as a primary means to prevent unwanted pregnancies and enabling controlled spacing between children for those who are not yet prepared to cease childbearing entirely [1 in [4]]. Birth control encompasses both natural and modern methods. Traditionally, due to cultural and religious beliefs, many families have leaned towards natural methods, often involving withdrawal or the meticulous tracking of fertility and infertility periods by women.

In contrast, modern hormone-based contraceptive methods, such as oral pills, injections, diaphragms, implants, and intrauterine devices, require medical expertise for counselling and administration by midwives. These methods offer promising outcomes in preventing unwanted pregnancies, alleviating concerns regarding withdrawal for men, and the need for meticulous tracking of fertility periods for women. Despite increasing acceptance of modern methods for birth control and child spacing, challenges persist, primarily related to associated inconveniences, thereby creating negative perceptions that make it look as if most women who use contraceptives suffer discomforts; hence, there is a need to investigate these issues.

1.1 Perception and contraceptive discomfort

Perception refers to how something is understood, interpreted, or seen by individuals or groups. Perception can be influenced by various factors, such as personal experiences, cultural background, and societal norms. It may or may not be based on factual evidence, as perceptions can sometimes be subjective or biased. There are many misconceptions about contraceptives.

Perception plays a crucial role in shaping attitudes toward contraceptives, impacting their utilization among sexually active females. Despite widespread knowledge of various contraceptive methods, their use remains suboptimal in Nigeria. This discrepancy can be attributed to pervasive misconceptions surrounding contraceptives, which deter women from embracing birth control measures. These misconceptions are often influenced by personal experiences, cultural norms, and societal biases rather than by factual evidence.

Studies have consistently highlighted the low uptake of contraceptives in Nigeria, despite numerous government and nongovernmental efforts to promote their benefits. Contraceptive use among sexually active females is not

optimal, although knowledge of various methods is high [5]. [8] suggested that contraceptive use in Nigeria has been consistently low despite its many benefits and several efforts by government and development partners to increase its uptake. Contraceptive use in Nigeria has remained low despite government and nongovernmental efforts to increase its use [10].

Negative perceptions of contraceptive methods, particularly among a significant proportion of nonusers, continue to hinder their adoption [9]. Addressing these misconceptions requires targeted educational interventions and advocacy efforts, particularly aimed at Nigerian men, who play a crucial role in family planning decisions [9].

Barriers to contraceptive use extend beyond mere perception, encompassing discomfort associated with different methods, such as headaches, fever, weight fluctuations, and irregular menstruation [4]. Additionally, fears of side effects, prejudices, and the behavior of healthcare providers contribute to the reluctance to utilize contraceptives [11]. Despite high awareness levels, these barriers persist, impeding effective contraceptive uptake [6]. They may not be unconnected to the misconception about the discomfort of using contraceptives.

To overcome these challenges, novel approaches to motivate and sustain family planning practices are imperative. New methods for motivating people to adopt and sustain family planning methods should be considered [6]. It is crucial to dispel misconceptions and alleviate discomfort associated with contraceptive methods through targeted awareness campaigns and educational initiatives. Mitigating the misconception of contraceptive methods is key to motivating more women to adopt contraceptives. To achieve that, it is very important to be aware of the number of methods available, which methods are associated with discomfort, and the ratio of women who show discomfort with contraceptives to those who do not.

The focus of this research, therefore, is to determine whether or not all methods are associated with discomfort and whether women who experience discomfort from contraceptive methods.

1.2 Review of related work on contraceptives

Adolescent reproductive health is an internationally agreed-upon development goal. Unmarried adolescents are not commonly included in global monitoring of contraceptive use despite the more severe consequences of unintended childbearing [1]. They carried out demographic research on the use of adolescent contraceptives and their effects on fertility. The objectives of their study were to document the levels and trends of contraceptive prevalence and demand for married and sexually active unmarried adolescent women aged 15–19 years in Latin America and sub-Saharan Africa. They proposed a fertility model informed by the proximate determinants' framework separating adolescents by marital status. The results of the study show that increasing the prevalence of contraceptives has already reduced adolescent fertility by 6.8% in Latin America and 4.1% in sub-Saharan Africa. They concluded that contraceptive demand and prevalence are generally greater for sexually active unmarried adolescent women than for those who are married.

The United Nations 2019 produced a data booklet that presents estimates of the prevalence of contraceptive use by method based on the World Contraceptive Use 2019 based on data from 1,247 surveys for 195 countries or areas of the world. The estimates are presented for female and male sterilization, intrauterine devices (IUDs), implants, injectables, pills, male condoms, withdrawal, rhythm and other methods combined. The estimates of contraceptive prevalence (any, modern or traditional) for 1994 and 2019 are from Estimates and Projections of Family Planning Indicators 2019. The Booklet indicated that women who are only sometimes sexually active and who want to delay pregnancy for a few months or a couple of years may prefer a short-acting method, one that they can start and stop on their own, over an IUD or an implant, both of which usually require a visit to a service provider to obtain and remove the device, or a permanent method such as sterilization. The experience, or awareness, of side effects and the inconveniences of using specific contraceptive methods, as well as their effectiveness at preventing pregnancy, play a role in the choice of the method used.

[5] conducted a study to determine the pattern of contraceptive use among female undergraduates at the University of Ibadan, Nigeria. A descriptive cross-sectional study was conducted among female residents on campus using self-administered questionnaires. Overall, 425 female undergraduates between the ages of 15 and 30 years were interviewed. Only 28.7% of the respondents were sexually active, and the mean age at sexual debut was 19 years \pm 2.31 years. Approximately 63.9% of the sexually active respondents had ever used some form of contraceptive, mainly a condom or pill. Only 26.7% of the sexually active respondents used a contraceptive at their last sexual encounter, and contraceptive use was significantly greater among the older females. Contraceptive use among sexually active female undergraduates at the University of Ibadan was not optimal, although knowledge of various methods was high. Appropriate interventions are needed to encourage contraceptive use among sexually active female undergraduates.

[3] A survey of 1500 students in postsecondary institutions in southwest Nigeria showed that the concept of emergency contraception (EC) was well known. A total of 32.4%, 20.4%, and 19.8% of the respondents reported that combined pills, progesterone-only pills, and intrauterine contraceptive devices (IUCDs) were usable for EC, respectively, while 56.7% mentioned the use of traditional methods. Only 11.8% had ever used either pills or IUCD, and 10.7% had used a traditional method. Few students (11.5% and 2.3%, respectively) knew the correct timing of EC pills and the IUCD. The respondents reported varying circumstances under which EC was indicated, but the majority cited condom breakage and sexual assault. The most popular media represented the most common source of information, while hospitals/clinics were the most common sources of procurement. Approximately 37% of the respondents planned to use EC in the future, 58% did not, and 4.7% were uncertain. The reasons for these responses were explored. This study aimed to assess the knowledge, attitudes, and practices related to emergency contraceptives among young females.

Although the studies reviewed indicate that people are generally aware of contraceptive methods, the majority of users are unmarried individuals who typically utilize them for emergency purposes. Additionally, these studies revealed that discomfort is commonly associated with contraceptive methods. However, it remains unclear what proportion of women experience discomfort among those who use contraceptive methods, as well as which specific contraceptive methods are associated with side effects.

2. METHODOLOGY

2.1 *Population and sample size*

The population for this study consisted of all women practicing modern family planning methods. The sample included 200 participants selected with the help of family planning units from five selected primary healthcare centers in the Yola North Local Government Area of Adamawa State. The choice of 200 participants was necessitated by the limited number of women patronizing the centers for family planning and the need to gather firsthand data on their experiences. The number was divided by 5, resulting in 40 participants per center.

2.2 *Sampling technique*

A purposive sampling technique was employed, allowing the researcher discretion in collecting the data. This technique was used to select five primary healthcare centers in the Yola North Local Government Area of Adamawa State. The selected centers are the Mallamre, Bekaji, Ladi Atiku, Nasarawo, and Jambutu Primary Healthcare Centers.

These centers were chosen because they are among the few large primary healthcare centers, and the researchers' proximity to the centers facilitated monitoring and contributions to providing family planning support, ensuring good population representation.

2.3 *Data collection*

Observation and interviews were used to gather the data. Researchers first observed relevant records on contraceptives to examine records of conditions and factors considered in administering contraceptives to women.

Interviews were conducted with 200 participants from the five selected primary healthcare centers after they had been administered contraceptives. These methods were chosen due to the small population size of participants.

2.4 Instrument for data collection

Through careful observation of records on contraceptives from the selected centers, researchers formulated and designed two template tools to collect data: the Volunteer Discomfort Experience Collection Form (VDEF) and the Volunteer Details Collection Form (VDCF). The VDCF contained fields for the primary healthcare center's name, address, volunteer's name, age, blood group, blood pressure, contraceptive type, date, and volunteer's phone number. The forms were distributed to each of the selected centers, and the centers were instructed to ensure that all the fields were filled. The forms were designed to help researchers track and interact with each volunteer. Forty volunteers from each center were included in this research.

The validity and reliability of the designed tools for collecting and analysing the data were determined by two experts in family planning and machine learning.

2.5 Procedure for data collection

Researchers liaised with selected centers, holding meetings at each center to brief heads of family planning units on the aims and objectives of the research and their role in gathering relevant and reliable data. Modalities for collecting data were agreed upon, including convincing women to participate, conducting all stated tests for volunteer participants, and administering contraceptives. During administration, family planning units conducted pregnancy tests, measured blood pressure, and recorded relevant data on the VDCF.

The VDEF is the tool researchers used to collect data on volunteers' discomfort as a result of the use of contraceptives. The VDEF consists of several columns. The columns include the blood group and type of contraceptive administered to the volunteer. The other columns are for discomfort. The discomforts included headache, fever, weight loss, weight gain, increased appetite, loss of appetite, etc.

2.6 Interview

The interviews were used to collect qualitative data, involving direct interaction between the researcher and the participants to gather information, opinions, and insights on specific topics. Researchers conducted structured interviews through phone calls, retrieving participant contacts from the VDCF.

During the interviews, volunteers were asked questions about their personal experiences and based on the items on the VDEF. Each case of discomfort was recorded as reported by the volunteer. The interviews were conducted twice. First, data on their experiences were collected.

Different contraceptives were administered to the women. The contraceptives were administered on different days at different centers. Calls were made based on the time at which the contraceptive was administered, and the first interview call was held in the third week of December 2023. The administered contraceptives are implano, jadel, noris, Sayana, implant, levo and depo.

2.7 Follow-up interview

Follow-up interviews with volunteers began in the third week of January 2024, with those who had received services in the second and third weeks of December 2023. The second phase of follow-up took place from January to February 2024 to assess any changes in the three weeks following the initial call.

3. Analysis

The data were analysed based on the study's objectives. Thus, qualitative and quantitative methods are used because they are suitable for these objectives.

A thematic analysis of the content of relevant documents was performed on the basis of an objective database that states "To comprehend the criteria for administering contraceptives and the accompanying tests".

Careful observation and analysis of the records of women on family planning indicated that before a woman is given any contraceptive method, a pregnancy test is conducted. The test is to ensure that a woman is not pregnant. The woman's weight was measured and recorded to determine the woman's body mass at the time of receiving the service. Blood pressure was measured to ensure that her blood pressure was at a normal level before administering the service. However, there were no records of blood type tests for women in any of the selected centers. Blood type measurement is not a criterion considered before administering a contraceptive.

Objective 2: To explore the reasons behind women's varying discomfort related to contraceptives.

Different contraceptive methods are given to women. Methods include pills, injections, or objects inserted into the woman's body. Table 1 shows the various methods and the number of women administered each of the methods. Table 2 shows the number of women with no discomfort based on the methods.

Table 1: Number and percentage of administered contraceptives

Micro	Noris	Depo	Excluton	Jadel	Levo	Sayana	Implanon	Total
21	15	12	6	27	24	45	24	174
12.068%	8.620%	6.896%	3.448%	15.517%	13.793%	25.862%	13.793%	100%

The table above shows the number of each contraceptive administered and their percentages.

Table 2: Contraindications to normal/no discomfort from contraceptives

Micro	Noris	Depo	Excluton	Jadel	Levo	Sayana	Implanon	Total
18	15	12	6	11	11	22	11	106
16.981%	14.150%	11.320%	5.660%	10.377%	10.377%	20.754%	10.377%	100%

Table 3 shows the discomforts recorded by the women based on the different methods. Table 3 clearly shows that the Noris, Depo, and Excluton methods have no adverse effects on women. However, micro, jadel, sayana, and implanon have discomfort effects on women, with the Sayana method having the greatest number of women with discomfort.

Table 3: Contraceptive discomfort

Micro	Noris	Depo	Excluton	Jadel	Levo	Sayana	Implanon	Total
3	0	0	0	16	13	23	13	68
4.411%	0.000%	0.000%	0.000%	23.529%	19.117%	33.823%	19.117%	100%

Objective 3: To investigate the potential correlation between inconveniences related to contraceptive usage and blood group type. Tables 4.1, 4.2, 4.3, and 4.4 show women's discomfort according to the different methods. Discomfort is related to blood type.

Table 4: Discomfort in the Sayana method by blood type

Method	Blood type	Discomfort	Number (%)
Sayana	A+	Fever, dizziness	4
	A+	Dizziness, weight gain, increase appetite, unusual menstruation	8
	O+	Headache, dizziness, unusual menstruation	7
	O+	Increase apatite, dizziness, weight gain	5

Table 4 presents the discomfort experienced by women using the Sayana method of contraception, categorized by blood type. According to the table, 4 women with blood type A+ reported fever and dizziness. Additionally, 8 women with the same blood type experienced dizziness, weight gain, increased appetite, and unusual menstruation. These discomforts mostly began within two weeks after the administration of the method.

For women with blood type O+, 7 experienced headaches, dizziness, and unusual menstruation, while another 5 reported increased appetite, dizziness, and weight gain. Similarly, this discomfort predominantly began within two weeks after the administration of the method.

Table 5: Discomfort in the Implaon method by blood type

method	Blood type	Discomfort	Number (%)
Implanon	AB+	headache, dizziness, loss of appetite, weight loss	9
	B+	Dizziness, weight loss, loss of appetite	6

Table 5 displays the discomfort experienced by women using the Implanon method of contraception, categorized by blood type. According to the table, 9 women with AB+ blood types reported experiencing headache, dizziness, loss of appetite, and weight loss. These discomforts predominantly began within two weeks after the administration of the method.

Among women with blood type B+ status, 6 experienced dizziness, weight loss, and loss of appetite. Similarly, this discomfort mostly began within two weeks after the administration of the method.

Table 6: Discomfort in the Levo method by blood type

method	Blood type	Discomfort	Number (%)
levo	A+	headache, weight loss, unusual menstruation	7
	A+	Headache, bleeding, unusual menstruation	2
	O+	Back pain, unusual menstruation	6

Table 6 presents the discomfort experienced by women using the Levo method of contraception, categorized by blood type. According to the table, 7 women with blood type A+ reported experiencing headache, weight loss, and unusual menstruation. Additionally, 2 women with the same blood type experienced headache, bleeding, and unusual menstruation. This discomfort predominantly began within the first week after the administration of the method.

Among women with blood type O+, 6 reported experiencing back pain and unusual menstruation. Similarly, this discomfort mostly began within two weeks after the administration of the method.

Table 7: Discomfort in the Jadel method by blood type

method	Blood type	Discomfort	Number (%)
Jadel	A+	headache, weight gain, increase appetite, and unusual menstruation	6
	B+	Weight loss, loss of appetite, unusual menstruation	3
	O+	unusual menstruation	3

Table 7 displays the discomfort experienced by women using the Jadel method of contraception, categorized by blood type. According to the table, 6 women with blood type A+ reported experiencing headache, weight gain, increased appetite, and unusual menstruation. Additionally, 3 women with blood type B+ experienced weight loss, loss of appetite, and unusual menstruation. This discomfort predominantly began within the first week after the administration of the method.

For women with blood type O+, 3 reported experiencing unusual menstruation, with discomfort mostly beginning within two weeks after the administration of the method.

4. Findings and discussion of the results

This research intends to determine, among other issues, the conditions for providing a particular contraceptive method aside from not being pregnant. Our preliminary interactions with family planning experts revealed that experts ensure that couples agree and consent to the use of contraceptives. That is done by asking patience questions about her partner and is done verbally.

Researchers performed the study before administering any method, and in addition to the pregnancy test, the woman's name, age, blood pressure, weight, and choice of method were recorded.

During the antenatal period, the experts discussed the different contraceptive methods available in their centers and the general complaints of each, and the contraceptive was administered based on the woman's conviction on the choice of method. However, the administration of a contraceptive method is performed on the basis of popularity, and speculations about its effectiveness do not reveal whether a particular method is suitable for a particular set of people.

To ascertain whether certain groups of women react differently to certain methods based on blood type, 200 women were administered different methods of contraceptives. Table 1 shows the total numbers of women who were contacted and interviewed after being administered contraceptives. The success rate for compliance was 87% (174), and the failure rate was 23% (26). Therefore, the overall response and commitment were excellent.

As shown in Table 3, 106 women lived a normal life after contraceptive methods were administered. 18 were administered micro, 15 were administered Noris, 12 were administered depo, 6 were administered excluton, 11 were administered jadel, 11 were administered levo, 22 were administered Sayana, and 11 were administered Implanon. A total of 16.98% were administered micro, 14.150% were administered noris, 11.32% were administered depo, 5.66% were administered excluton, 10.37% were administered jadel, 10.37% were administered levo, 20.75% were administered Sayana, and 10.37% were administered Implanon. The results showed that the most common contraceptive used was Sayana (20.75%), followed by micro- and Noris (16.98% and 14.15%, respectively). However, the least commonly used method was excluton (5.66%).

To examine whether the inconveniences associated with contraceptive usage are related to blood group type, Table 2 shows that 68 women experienced discomfort based on their blood group. Three (4.41%) patients experienced discomfort due to the use of Micro, and no signs of discomfort due to the use of Noris, Depo, or Excluton. In the case of Jadel, 16 or 13 (19.11%), 23 (33.82%), and 19.11% of the women complained of discomfort, respectively.

Table 8: Women with discomfort and no discomfort

Experience	Micro	Noris	Depo	Excluton	Jadel	Levo	Sayana	Implanon	Total
Discomfort	3	0	0	0	16	13	23	13	68
No discomfort	18	15	12	6	11	11	22	11	106
Total	21	15	12	6	27	24	45	24	174

As shown in Table 8, of the 21 women who received the microconception contraceptive, only 3 experienced discomfort. This finding implies that Micro is good and safe for use. In the case of Noris, Depo, and Excluton, no woman complained of any discomfort. This also means that the three methods are very good and safe for use. Jadel and Sayana recorded the most discomfort (16 and 23, respectively) in 24 and 45 women. In the case of Levo, 13 women complained of discomfort, and the same was true for implanon, with 13 women complaining of discomfort. The number of women who complained of discomfort was greater than the number of women who showed no sign of discomfort in the cases of Jadel, Levo, Sayana, and Implanon.

These discomforts experienced by women are peculiar to their blood type. Thus, Jadel, Levo, Sayana, and Implanon. Caution should be used when considering a woman's blood group.

As shown in Tables 1, 2, and 3, 108 of the women did not experience any discomfort as a result of using contraceptives. This means that the use of contraceptives is good and safe for family and birth control. However, 68 women experienced discomfort when using contraceptives. This means that few women will and are experiencing discomfort, and discomfort differs according to method and blood type.

In the case of the Sayana method, blood types A+ and O+ had one or more discomforts. In the implanon, Ab+ and B+ as well as Levo A+ and O+ and Jiaadel A+ and B+ and O+ are present. Only the JEL method was used for women with three different blood types who experienced discomfort.

The results show that the experience of discomfort is dependent on the blood group. In the sayana method, A+ discomfort is characterized by dizziness, weight gain, increased appetite, and unusual menstruation. However, for blood type O+ patients, the discomforts include headache, dizziness, and unusual menstruation. Dizziness, increase in appetite, and unusual menstruation are synonymous with blood type.

In the Implanon method, Ab+ and discomfort are headache, dizziness, loss of appetite, and weight loss. However, in B+ patients, the discomforts included dizziness, weight loss, and loss of appetite. Headache is the only discomfort that distinguishes Ab+ from B+.

Similarly, in the Levo method, some women who were A+ reported headache, weight loss, and unusual menstruation, and some with similar blood types reported headache, bleeding and unusual menstruation. However, bleeding may result in weight loss. Therefore, she also experienced unusual menstruation. Thus, they have the same discomfort. In contrast, O+ women reported back pain and unusual menstruation. Hence, unusual menstruation is common for O+ and A+.

The Jadel has three different blood types that cause discomfort. Some women with A+ status reported headache, weight gain, increased appetite, and unusual menstruation. B+ reported weight loss, loss of appetite, and unusual menstruation, and O+ reported only unusual menstruation. However, in all methods and blood types, unusual menstruation is found.

4.1 *Summary of the research findings*

This research aimed to identify factors influencing women's reluctance to use modern contraceptives. Key findings and discussions based on the results are as follows:

4.1.1 *Criteria for Administering Contraceptives*

- ✓ Pregnancy testing is a standard procedure before administering any contraceptive.
- ✓ Other parameters, such as weight, blood pressure, and the woman's choice of method, were recorded.
- ✓ However, blood type measurement is not considered a criterion before administering contraceptive methods.

4.1.2 *Variability in Women's Discomfort to Contraceptives:*

- ✓ Different contraceptive methods were administered to 200 women, with varying degrees of discomfort reported.
- ✓ Some women did not experience any discomfort, while others reported inconveniences such as dizziness, headaches, and changes in weight and appetite.
- ✓ The use of certain contraceptive methods, such as Sayana, was associated with greater discomfort than the use of other methods.

4.1.3 *Correlations between Discomfort and Blood Group Type:*

- ✓ Discomfort experienced by women was analysed based on their blood group.
- ✓ Certain discomforts were more prevalent among specific blood groups for different contraceptive methods.
- ✓ For example, women with blood types A+ and O+ experienced specific discomforts with the Sayana method, while those with blood types AB+ and B+ experienced different discomforts with the Implanon method.

4.1.4 *Effectiveness of Contraceptives:*

- ✓ Among the women surveyed, 108 did not experience any discomfort with contraceptive usage, indicating its overall effectiveness and safety.
- ✓ However, 68 women reported discomfort, suggesting that while contraceptives are generally effective, some individuals may experience adverse effects.

5. **Limitations of the study**

The research was limited to five primary healthcare centers, and data were collected from 200 married women who volunteered to participate in the study from these selected centers. The choice of these centers was primarily based on their size and their notable contribution to providing family planning support. Additionally, the decision to include only 200 women was constrained by the limited number of women who sought healthcare services for family planning at these facilities.

6. **Conclusion**

The focus of this research, therefore, is to determine whether or not all methods are associated with discomfort and whether women who experience discomfort from contraceptive methods. Our results indicate that the majority of women using contraceptives do not experience discomfort. However, for those who do, the nature of discomfort varies across different methods and blood types. Women with similar blood types tend to experience similar discomfort.

7. **Recommendations based on findings:**

- ✓ Tailored Recommendations: Healthcare providers should prioritize personalized contraceptive recommendations, taking into account individual factors such as blood type, to minimize discomfort and improve user satisfaction. This can enhance the effectiveness and acceptability of contraceptive methods among women.
- ✓ Education and Awareness: Government and healthcare authorities should invest in comprehensive education and awareness campaigns about contraceptive methods, highlighting their benefits, potential

discomfort, and the importance of individualized recommendations. This can help address misconceptions and promote informed decision-making among women.

- ✓ **Accessibility and Affordability:** Efforts should be made to ensure the accessibility and affordability of modern contraceptive methods, particularly for marginalized and underserved communities. This includes improving access to healthcare facilities offering contraceptive services and subsidizing costs where necessary.
- ✓ **Continuous Monitoring and Evaluation:** Healthcare systems should establish mechanisms for continuous monitoring and evaluation of contraceptive usage, including tracking discomforts and side effects experienced by women. These data can inform ongoing improvements in contraceptive services and guide future research initiatives.
- ✓ **Research and Development:** Further research and development efforts should focus on refining contraceptive methods to minimize discomfort and side effects while maximizing effectiveness. This may involve exploring innovative technologies and formulations tailored to individual needs, including considerations based on blood type.

8. Ethical considerations:

Prior to data analysis, formal approval was obtained to collect data from five primary healthcare centers. Informed consent was obtained from all participants during data collection, and this process was approved by the Adamawa State Health Research Ethical Committee. Consent approval forms were provided to volunteers and completed as part of the ethical procedures, ensuring that each participant participated willingly. The authors affirm that all procedures contributing to this work comply with the ethical standards set by the Adamawa State Health Research Ethical Committee.

Reference:

- [1] Alano, A., & Hanson, L. (2018). "Women's perception about contraceptive use benefits towards empowerment: A phenomenological study in Southern Ethiopia". 13(9), PLoS ONE, e0203432.
- [2] Antonio, D., Sanchez, P. & Jose, A. O. (2018). Adolescent Contraceptive Use and its Effects on Fertility. V38, Article 45, Pages 1359–1388, [http://www.demographyresearch.org/Volumes/Vol38/45/DOI: 10.4054/DemRes.2018.38.45](http://www.demographyresearch.org/Volumes/Vol38/45/DOI:10.4054/DemRes.2018.38.45)
- [3] Arowojolu, A.O, & Adekunle A.O. (2000). Perception and practice of emergency contraception by postsecondary school students in southwest Nigeria. Afr J Health.4(1):56-65. PMID: 11000709. Reprod
- [4] Bala, P.B. & Yusuf, M.M. (2023). Medical Factor-Based Mobile Application for Choosing Contraceptives: A data mining Approach. *American journal of data mining and knowledge discovery*, 8(1),1-10. <https://doi.org/10.11648/j.ajdmkd.20230801.11>
- [5] Cadmus, E., & Owoaje, E. (2009). Patterns of Contraceptive Use among Female Undergraduates in the University Of Ibadan, Nigeria. *The Internet Journal of Health*. 10 (2). Health.
- [6] Durowade, K. A., Omokanye, L. O., Elegbede, O. E., Adetokunbo, S., Olomofe, C. O., Ajiboye, et al (2017). Barriers to Contraceptive Uptake among Women of Reproductive Age in a Semi-Urban Community of Ekiti State, Southwest Nigeria. *Ethiopian journal of health sciences*, 27(2), 121–128. <https://doi.org/10.4314/ejhs.v27i2.4>
- [7] Emily E. Crawford, Christina J. Atchison, Yewande P. Ajayi & Aoife Doyle.(2021). Modern contraceptive use among unmarried girls aged 15–19 years in South Western

- Nigeria: results from a cross-sectional baseline survey for the Adolescent 360 (A360) impact evaluation. *Reproductive Health* journal volume 18, Article number: 6
- [8] Fadeyibi, O., Alade, M., Adebayo, S., Erinfolami, T., Mustapha, F., & Yaradua, S. (2022). Household Structure and Contraceptive Use in Nigeria. *Frontiers in global women's health*, 3, 821178. <https://doi.org/10.3389/fgwh.2022.821178>
- [9] Joshua Odunayo Akinyemi, Mobolaji Modinat Salawu, Rotimi Felix Afolabi, Ayo Stephen Adebowale (2023). Nigerian men and modern contraceptives: who are the nonusers and what are their perceptions about family planning?. *Pan African Medical Journal*. 2023;46:64. [doi: [10.11604/pamj.2023.46.64.37248](https://doi.org/10.11604/pamj.2023.46.64.37248)] Available online at: <https://www.panafrican-med-journal.com/content/article/46/64/full>
- [10] Ononokpono, D. N., Odimegwu, C. O., & Usoro, N. A. (2020). Contraceptive Use in Nigeria: Does Social Context Matter? *African Journal of Reproductive Health/ La Revue Africaine de La Santé Reproductive*, 24(1), 133–142. <https://www.jstor.org/stable/27086508>
- [11] Rustagi, N. & Taneja, D.K., Kaur, R. & Ingle, G.K.. (2010). Factors affecting contraception among women in a minority community in Delhi: A qualitative study. 33. 10-15.
- [12] Urbaniak, A. (1996). Expert system for diagnosis of womens' menstrual cycle using natural family planning method. Presented on 17th IFIP Conference on System ModeUing and Optimization.
- [13] World Health Organization (2020).Family planning/contraception methods. Available at <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>.