


Contraceptive Experiences of Women of Procreation Age Who Attended Two Health Centers in the City of Abidjan (Cote d'Ivoire)

Essis Esme Marie Laure^{1,2*} , Koffi Kouassi Benjamin^{1,2}, Manouan N'guetta Mathilde^{1,2}, Coulibaly-Koné Soltié Aminata^{1,2,3}, Bamba Iba¹, Kpebo Djoukou Olga Denise^{1,2,4}, Konan Loukou Leandres¹, Aka Joseph^{1,4}, Ndola Prata⁵

¹National Institute of Public Health, Abidjan, Côte d'Ivoire

²Reproductive Health Research Unit of Côte d'Ivoire, Abidjan, Côte d'Ivoire

³Regional Health Directorate of the Me, Abidjan, Côte d'Ivoire

⁴Department of Public Health and Biostatistics, Faculty of Medicine, Université Félix Houphouët Boigny, Abidjan, Côte d'Ivoire

⁵Bixby Center for Population, Health and Sustainability, School of Public Health, University of California, Berkeley, CA, USA

Email: *essismarie2007@yahoo.fr

How to cite this paper: Laure, E.E.M., Benjamin, K.K., Mathilde, M.N., Aminata, C.-K.S., Iba, B., Denise, K.D.O., Leandres, K.L., Joseph, A. and Prata, N. (2023) Contraceptive Experiences of Women of Procreation Age Who Attended Two Health Centers in the City of Abidjan (Cote d'Ivoire). *Health*, 15, 1-19.

<https://doi.org/10.4236/health.2023.151001>

Received: November 18, 2022

Accepted: January 13, 2023

Published: January 16, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Introduction: Maternal mortality, which is estimated at 614 deaths per 100,000 births in Côte d'Ivoire, is associated with a low national contraceptive prevalence rate of 13.9%. In this study, we are interested in the contraceptive experiences of women who attend health centers to estimate their rate of contraceptive use and to assess the factors involved in the use of modern contraceptive methods among women of childbearing age who are exposed to the risk of pregnancy. **Method:** A descriptive cross-sectional study was conducted from December 2018 to September 2019 among 423 women, who attended two health centers in Abidjan. A bivariate analysis identified factors associated with contraceptive use by these women. A descriptive analysis determined the means for the quantitative variables and the frequencies and percentages of qualitative variables. Interpretation of results was based on significance ($\alpha = 5\%$, 95% CI). **Results:** Contraceptive prevalence was 37%. There was a significant relationship between contraceptive use and the socio-demographic and reproductive characteristics of women ($p < 0.001$). **Conclusion:** Women who were over 35 years age, uneducated, primary school graduates, housewives, unemployed, in the informal sector, Muslims, nulliparous, and lacking information and decision-making power were less likely to use modern contraceptive methods. They are the target population for strategic interventions to improve contraceptive prevalence.

Keywords

Use, Contraceptive Methods, Women, Health Centers, Côte d'Ivoire, Africa

1. Introduction

Family planning (FP) can be defined as a group of methods that make it possible to 1) Avoid unwanted pregnancies; 2) Choose the number of children desired and the times of their births; 3) Space births by respecting the appropriate time interval for the health of the mother and the child; 4) Schedule births at the best time regarding the mother's age [1].

Furthermore, it is recognized as an important indicator of the level of achievement of the demographic dividend and sustainable human development [1]. However, contraceptive prevalence in developing and poor countries remains low [2]. Contraceptive prevalence in Côte d'Ivoire has changed only slightly among women in union, from 9.8% (1998) to 13.9% (2012), with significant regional disparities despite all the strategies deployed by FP programs [2]. It is then estimated at 21% according to the 2018 PF report [3].

Maternal and child health is one of the priorities of the Ministry and the national health policy, which is reflected in the National Health Development Plan 2016-2020. Several studies have examined the reasons for the low usage of contraceptive in the general female population [4] [5] [6] and specific groups of women in society at different periods of their lives [7] [8] [9]. Other studies have targeted female health center attendants to document negative outcomes related to modern contraceptive methods (MCM) [10], unwanted pregnancies [11] and induced abortions [12] [13], satisfaction with contraceptive use [14], the quality of PF services provided [3] [15] and women's contraceptive practices [10] [16]. There are few studies that have investigated the factors associated with MCM usage by women attending health centers [17] particularly in the Ivorian context, which is the reason for this study that determined the rate of contraceptive usage and the factors related to this usage among clients of two health centers in Abidjan.

2. Material and Method

2.1. Study Framework

The economic capital city of Côte d'Ivoire, Abidjan, is inhabited by approximately five million people, *i.e.*, 21% of the country's total population. It has three regions and thirteen health districts and is home to almost all the reference health establishments, including four University Hospital Centers, a tenth General Hospitals (GH), a plethora of health centers and private clinics. It concentrates the largest number of health activities at national level.

We have decided to conduct the present study in two randomly selected health centers, given our financial difficulties and our intention to keep the work

concise. The study was conducted at the General Hospital (GH) of Yopougon Attié in the Yopougon-East health district and the Adjamé 220-unit urban health center in the Adjamé-Plateau-Attécoubé health district (**Figure 1**).

The suburb of Yopougon has 1,071,543 inhabitants (2014 General Census of Population and Housing) on 153.06 km² or 7004 inhab/km². It is known for its warm and popular ambiance that attracts residents from other municipalities. The GH of Yopougon Attié was created in 2013 to support the University Hospital Center of Yopougon. It has an obstetrical unit and carries out about 26 deliveries per day. It treats an average of 80 - 100 children per day. Each doctor sees at least 20 patients per day. The FP service saw 1510 patients in 2018 of which 725 (48%) are put on MCM (**Figure 1**).

The suburb of Adjamé, located in central Abidjan, north of Plateau, has 372,978 inhabitants living on (2014 General Census of Population and Housing) 12.10 km², *i.e.* 21,016 inhabitants/km². As buses, mini-buses, and trains central stations, as well as the biggest day market location, Adjamé sees more than a million people passing through its center every day. As such, it is the place where migrants and local populations cross meet (**Figure 1**).

The Urban Health Unit of 220 dwellings in Adjamé was created in 2006. The FP Service received 7524 women of childbearing age in 2019, of whom 5098 (67.7%) were advised on contraceptive methods, of which 485 (6%) were put on modern contraceptive methods. The center cared for a total of 19,741 women in 2017, 26,323 women in 2018 and 13164 women in 2019 (all consultations combined).

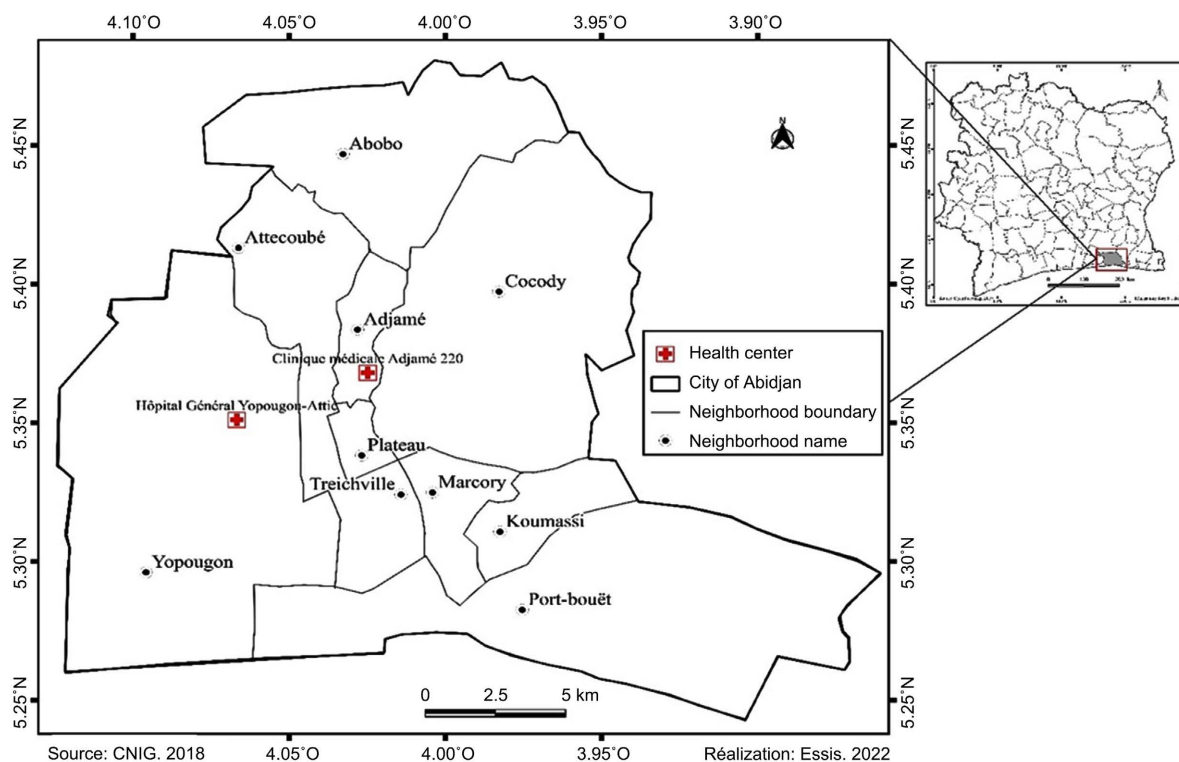


Figure 1. Map of the city of Abidjan locating the study's health centers.

2.2. Study Type

We conducted a cross-sectional study with descriptive and analytical purposes through the collection of quantitative data. This study took place over a 10-month period from December 2018 to September 2019.

2.3. Study Population

The study population consisted of all women of childbearing age, sexually active and at risk of pregnancy, attending the two health centers selected for the study.

Inclusion criteria: All FP, maternity, and gynecology clients of reproductive age, sexually active, and at risk of pregnancy who agreed to participate in the study.

Exclusion criteria: Clients who were not of childbearing age, those who were not sexually active, those who were not at risk of pregnancy, and those who refused to participate in the study.

2.4. Sampling and Sample Size

The sample size for quantitative data collection was determined by using the Schwartz formula

$$n = t^2 \cdot \frac{P \cdot (1 - P)}{e^2}$$

- n = The sample size.
- t = The reduced deviation = 1.96 for a risk of error of 5%.
- P = Prevalence of the phenomenon in the population = 50%.
- $q = 1 - P = 0.5$.
- e = The precision of the result required = 5%.

$$n = 384.33.$$

We have adjusted our sample size (n) to 423 women of childbearing age at risk of pregnancy (*i.e.*, a 10% increase) to ensure sufficient representativity at the level of the sample subgroups. Women were recruited by non-probability sampling until our sample size was obtained.

2.5. Data Collection

The investigators, health workers (physicians and nurses, public health specialists, second and third authors), were briefed on the study and trained on developed survey sheets. The collection materials were pre-tested before the survey began to ensure their validity and reliability. Information was collected from participants in a face-to-face interview, using an individual structured questionnaire containing closed and semi-open questions.

The dependent variable was women's use of MCM based on the question, "Are you currently using a modern contraceptive method?"

The independent variables were socio-demographic and reproductive characteristics. Other areas covered by the questionnaire included knowledge and perceptions of FP methods, acceptability of MCM by male partners and close con-

tacts, and communication about FP methods.

Data collection took place from January to May 2019. The questionnaire was administered in French in most cases or in local languages in some cases when necessary. Some data were verified by the interviewers.

2.6. Data Collection Process

Before the study was conducted, an awareness and information session were held in the selected health centers to obtain the support of health workers, women, and their partners (secondary target) to facilitate the survey. At each collection session, the interviewer explains the purpose of the survey to the respondent and reassures them that the data collected is confidential. The interviewer checks that the forms are filled out correctly before thanking the respondent for her cooperation at the end of each interview.

2.7. Data Processing and Analysis

The data collected were entered using Epi-Data software and then analyzed using SPSS 16 software. Descriptive analysis determined means for quantitative variables and then frequencies and percentages for qualitative variables. Interpretation of results was done at the significance level ($\alpha = 5\%$, 95% CI).

2.8. Ethical Considerations

Ethical approval was obtained from the National Ethics Committee for Life Sciences and Health of Côte d'Ivoire (N/Ref: IRB000111917). Other approvals were obtained from the Ministry of Health, particularly from the directors of the health centers. Ethical considerations included confidentiality and anonymity of responses. Participants were given autonomy, time, and information about the purpose, objectives, methods, and use of the results to decide to participate voluntarily, freely, and without pressure. Informed consent was obtained from all subjects and/or their legal guardian. Confidentiality was guaranteed by making the questionnaire anonymous.

3. Results

3.1. Contraceptive Use Rates, Preferences, and Women's Knowledge for MCM

Among a total of 423 women of childbearing age and at risk of pregnancy recruited in the two selected health centers, only 37% were using a modern contraceptive method at the time of the study. Injectable contraceptive methods (36%) were the most used, followed by the pill (32%) and implants (26%) (**Figure 2**). However, almost all these women had already heard of FP (94%) and MCMs (99%), the best known of which were the pill (43%), injectable contraceptives (33%) and implants (17%). They knew that contraception was intended for women of childbearing age (88%) to avoid unwanted pregnancies (96%) and knew the supply sites (97%), including health centers.

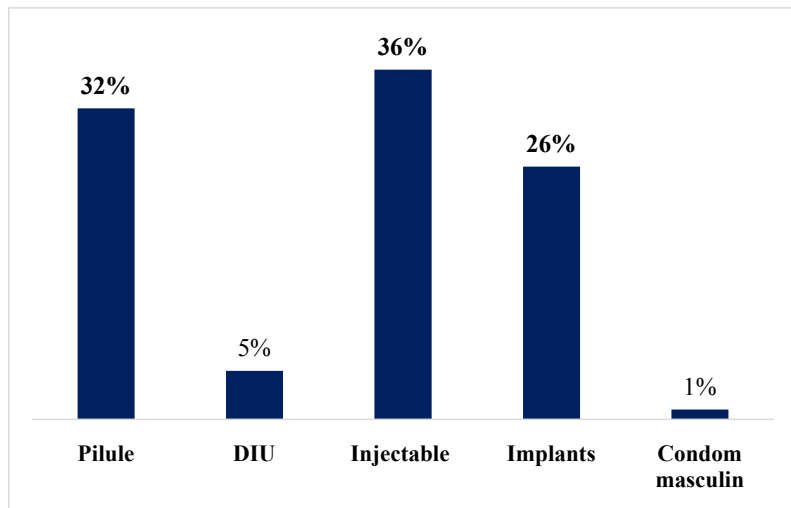


Figure 2. Type of modern contraceptive methods used by women in the study.

3.2. Contraceptive Use and Sociodemographic Characteristics

MCM use was significant among women aged 15 - 25 years (39%) and 25 - 35 years (44%), with high school (44%) and higher education (30%), managers (18%), and students (29%), single (42%), Catholic (30%) Protestant (19%), and evangelical (31%) religious denominations. Thus, age, education, being single, and Christianity favored MCM use. Furthermore, this use increased with the age of the women (**Table 1**).

Indeed, the Muslim women in the study were predominantly uneducated (52%), most Catholic (38%) and Evangelical (37%) women had tertiary education, while Protestant women had more of a secondary education (**Table 2**).

3.3. Contraceptive Use and Perceptions

Among the respondents who had a current contraceptive method, the majority stated that they were able to demand a condom during sex (76%) and to take the initiative to start a modern contraceptive method in their relationship (80%). These two acts express the decision-making power of the woman in the couple (**Table 3**). A large proportion of the respondents believed that the use of contraception should be a joint decision of the couple (96%) and that condoms effectively protect against pregnancy/STI/HIV/AIDS (96%). In addition, these women did not need to go to the health center to obtain information on FP methods (93%). They wanted condoms to be used by married people (87%) and discussed family planning (54%) with their partners. In contrast, women who experienced peer pressure (18%) and those who did not discuss sexual issues with their partners (43%) used MCMs (**Table 3**).

In sum, factors such as the woman's decision-making power, communication about FP within the couple, and positive ideas about the effectiveness of FP methods favored the use of MCM. However, opposition from close family and friends, the taboo nature of sex in the couple, and the fact that they did not go to

the health center to obtain information on FP did not prevent the use of MCM (Table 3).

Table 1. Contraceptive use according to socio-demographic characteristics.

Socio-demographic characteristics	Use of MCM		Chi-Pearson/ P-value
	Frequency/Percentage (%)		
	Yes	No	
<i>Age (years)</i>			
15 - 25	61 (39)	100 (38)	0.015
25 - 35	69 (44)	118 (42)	
35 - 50	26 (17)	49 (22)	
<i>Education level</i>			
No schooling	6 (4)	48 (18)	<0.001
Primary	34 (22)	73 (27)	
Secondary	69 (44)	93 (35)	
University	47 (30)	53 (20)	
<i>Profession</i>			
Senior and middle-class employees	28 (18)	50 (17)	<0.001
Informal sector	65 (42)	131 (49)	
Pupils and students	45 (29)	28 (11)	
Housewife and unemployed	18 (11)	58 (23)	
<i>Marital status</i>			
Single	66 (42)	69 (26)	0.025
Married	74 (47)	158 (59)	
Single person	16 (11)	40 (15)	
<i>Religion</i>			
Muslim	29 (17)	93 (35)	0.015
Catholic	45 (30)	67 (25)	
Protestant	29 (19)	30 (11)	
Evangelical	48 (31)	71 (27)	
Other	5 (3)	6 (2)	

Table 2. Distribution of women by religion and educational level.

Woman's religion	Woman's educational level				Chi-Pearson / P-value
	None	Primary	Secondary	Higher	
Muslim	32 (52)	39 (39)	43 (27)	8 (8)	<0.001
Catholic	11 (18)	19 (19)	44 (27)	38 (38)	<0.001
Protestant	5 (8)	6 (6)	35 (22)	13 (13)	<0.001
Evangelical	12 (20)	32 (32)	38 (23)	37 (37)	<0.001
Other	1 (2)	4 (4)	2 (1)	4 (4)	<0.001

Table 3. Contraceptive use according to the perceptions of the women interviewed.

Perceptions	Use of MCM		Chi-Pearson/ P-value
	Frequency/(%)		
	Yes	No	
<i>Are you sure you can demand a condom when you have sex?</i>			
Yes	119 (76)	116 (43)	<0.001
No	37 (24)	151 (57)	
<i>Are you sure you can take the lead on modern contraception in your relationship?</i>			
Yes	124 (80)	108 (40)	<0.001
No	32 (20)	159 (60)	
<i>Do you think that regular use of contraception is the sole responsibility of the husband or wife?</i>			
Yes	6 (4)	26 (10)	0.027
No	150 (96)	241 (90)	
<i>Do you discuss sexuality issues with your partner?</i>			
Yes	90 (57)	166 (63)	<0.001
No	68 (43)	99 (37)	
<i>Do you discuss family planning with your partner?</i>			
Yes	84 (54)	140 (53)	<0.001
No	74 (46)	125 (47)	
<i>Have you already gone to the health center to receive information about FP?</i>			
Yes	11 (7)	205 (77)	<0.001
No	145 (93)	62 (23)	
<i>Are you under pressure from others not to use modern contraceptive method?</i>			
Yes	28 (18)	4 (1)	<0.001
No	132 (85)	263 (99)	
<i>Do you think that married people should use condoms?</i>			
Yes	136 (87)	164 (61)	<0.001
No	20 (13)	103 (39)	
<i>Do you believe that condoms are effective in protecting against pregnancy/STI/HIV/AIDS?</i>			
Yes	150 (96)	204 (75)	<0.001
No	6 (4)	63 (25)	

3.4. Contraceptive Use and Reproductive Factors

MCM use was high among women who wanted only two children (49%) and those who had an average of two living children (64%). This contraceptive use was also important among women who had had unwanted pregnancies (15%). Thus, the number of children desired, the number of living children and the occurrence of unwanted pregnancies favored the use of contraceptive methods (15%) (Table 4).

Table 4. Contraceptive use by reproductive factors of interviewed women.

Reproductive factors	Use of MCM		Chi-Pearson/P-value
	Frequency/Percentage (%)		
	Yes	No	
<i>Average number of children wished</i>			
2	77 (49)	86 (32)	<0.001
5	68 (44)	163 (62)	
+8	11 (7)	18 (6)	
<i>Average number of living children</i>			
0	47 (18)	53 (34)	<0.001
2	172 (64)	84 (54)	
5	48 (18)	19 (12)	
<i>Unwanted pregnancies</i>			
Yes	24 (15)	25 (9)	<0.001
No	132 (85)	242 (91)	

4. Discussion

This study, which investigated the contraceptive experiences of 423 women attending two health centers in Abidjan, was limited by financial constraints, non-response, and incomplete or even erroneous information. Despite these limitations, our study revealed factors influencing the use of MCMs that need to be discussed.

4.1. Contraceptive Use

The MCM use rate was estimated at 37% in our study population. This rate is higher than the national contraceptive prevalence estimated at 21% according to the 2018 FP report. Compared to previous studies, our result remains largely below that of Keita, estimated at 64% among women at the Center of Health Reference of Municipality VI of the District of Bamako in Mali [10]. The use rate of HIV-infected women followed as outpatients at Treichville University Hospital was estimated at 62.9% by N'Guessan *et al.* [16].

High contraceptive prevalence in hospitals in big cities are not exceptional and can be explained by the nature of the study population. These are people who are followed by health workers and received accurate and timely information that improves their knowledge. These women are supposed to be more receptive to health offers and do not reflect the health behavior of the general population. The weakness of our results could be explained by missed opportunities for information and communication in the health centers. Indeed, only 51% of the clients had received information/counseling on FP. However, this result may be related to the value placed on fertility in our country. Thus, the use of MCMs remains a challenge in African countries despite years of awareness raising and strategic interventions supported by visible political leadership. The women in

our study preferred injectable contraceptives (36%), the pill (32%) and implants (26%). This result could be explained by the ease and discretion of using these methods, which are often used without the knowledge of the partner [18]. Injectable progestins, implants and intrauterine devices were the methods of choice for women in the N'guessan study population in Abidjan [16] and Keita in Bamako [10]. The pill was the safe method for young French women under the age of 30 [19]. Although the male condom was in use in the health zones of Dibindi and Mumbunda in the Democratic Republic of Congo [4] [20].

4.2. Factors Explaining Low Contraceptive Use

MCM use was high among young women aged 15 - 35, especially those aged 25 - 35 (44%). Young women are first concerned with completing their studies and then, once they are in a household, they are faced with the problems of spacing and limiting births. Our results are consistent with previous studies that have estimated the contraceptive use rate at 35.7% among women aged 25 - 29 in the DRC [20] and to 49% - 53% among Nigerian women aged 25 - 39 [21].

Education improves knowledge and removes one of the major barriers to the use of MCMs, which is misinformation about their side effects and undesirable consequences on the reproductive health of users. Therefore, several studies, like ours, have shown that education improves the use of MCM [4] [22] [23] [24] [25]. This explains the high use of MCM among women in managerial positions in society and among the Christian women in the study. Indeed, Catholic, Evangelical and Protestant women tended to have higher and secondary levels of education respectively, whereas Muslim women were mostly uneducated. However, this result found also by Matungulu CM (2015) and Ugal BD (2013), could highlight a superficial practice of the Christian faith through the non-respect of the fundamental biblical principles on the one hand and on the other hand the quest for certain temporal and worldly privileges [20] [21].

The educational advantage of our study population could explain the fact that 93% of the users of contraceptive methods did not need to go to the health center to obtain information on FP methods and the results showed that they had a good knowledge of MCMs. In fact, the users of MCMs had primary (22%), secondary (44%) and higher (30%) levels of education. They have the ability and the possibility to inform themselves through the mass media, the internet, social networks, books and magazines (Essis EML. 2021) [26]. Moreover, education increases women's decision-making power as well as their ability to communicate and negotiate with their partners. This is why pressure from the immediate environment had no influence on the contraceptive practice of the majority of MCM users (18% vs. 1%), nor did the taboo nature of sex in couples' communication.

Contraceptive use was high among single women (42%) and this result was found by Congo Z (2005) in Burkina Faso [27]. The single woman is very often schooling and on parental cover. She can also be a young servant with the con-

cern of stabilizing herself on the matrimonial side. She cannot afford the luxury of having children who risk having different fathers or finding herself in a situation where the father refuses to assume the paternity of the children.

The woman's decision-making power influences contraceptive use. In fact, contraceptive use was important for women who could make the decision or take the initiative to use MCMs, in this case condoms, in their relationship. Low contraceptive use is greatly affected by the woman's lack of decision-making power. This result has similarities with previous studies [28] [29] [30] [31] [32]. Contraceptive use is better and even more effective if it is accompanied by good communication within the couple [28] [33] [34] [35] [36] and by positive ideas in favor of FP and MCM [6] [9] [22] [37] [38] [39]. Thus, contraceptive practice without the knowledge of the partner is the result of poor communication between partners [26] [31] [34].

The wish to have very few children leads to an early need for birth control. An unwanted pregnancy reflects an unmet need for FP [13] and is a signal to start contraception and avoid similar cases. Every birth is the responsibility of the parents, who will normally be responsible for the new human being with all its rights. For this reason, parents have the duty to assume a responsible paternity and maternity to avoid that their offspring are taken care of other persons or have their fundamental rights violated. For these reasons, people define an ideal number of children for which they can assume responsibility and then use contraception with reason.

4.3. Difficulties and Limitations of the Study

The difficulties encountered were related to the availability of women. Indeed, the waiting time before the consultations is long and constitutes a waste of time for the women. They are therefore stressed and impatient to return to their occupations. In addition, our respondents found some of the questions difficult or too private and the length of the interviews too long. They were wary of confidentiality, and this was justified by the fear of indiscretion experienced by some users. Many women use contraceptive methods without the knowledge of those around them, including their spouses.

The main limitations of this study were financial restrictions that limited it to two health centers, non-response, and incomplete and even erroneous information from women.

5. Conclusion

Several factors were responsible for the low use of modern contraceptive methods among women using health services. Women over 35 years of age, those with no schooling and primary education, housewives and the unemployed, those in the informal sector, Muslims, women without information and decision-making power, and nulliparous women negatively influenced the use of MCMs. In developing FP strategies, emphasis should be placed on FP information/

counseling at health facilities, and on enrolling and retaining girls in school through the tertiary level. The results of this study require further statistical analysis and a qualitative study to document women's perceptions of the obstacles to low utilization of MCM.

Ethics Approval and Consent to Participate

The data used to write this article are part of a larger project that involved several health centers in Abidjan, the Ivorian economic capital, and Agboville, located 80.2 km from Abidjan. The project protocol was reviewed and approved by the National Ethics Committee for Life Sciences and Health of Côte d'Ivoire (N/Ref: IRB000111917, see Appendix 1).

Informed consent to participate was obtained from all subjects and/or their legal guardian, through the signing of a consent form (see Appendix 2). All methods described in the approved protocol were performed in accordance with the relevant guidelines and regulations, required by the ethics committee.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' Contributions

EEML developed the study protocol, KKB and MNM collected the data, KKB and EEML analyzed the data, EEML interpreted the data and wrote the manuscript. All authors read, corrected, and approved the final manuscript. So, all the authors mentioned in this article did contribute to the production of the work we are submitting, and the contents of the manuscript have never been published.

Acknowledgements

This study would not have been possible without the support of the management of the National Institute of Public Health in Abidjan. We thank the management of the General Hospital of Yopougon and the Urban Health Center of Adjamé 220 units who accepted that our study takes place in their structure. We are particularly grateful to the women users of these health centers who allowed us to collect their data. We also thank the medical staff of these health centers who played an essential role in sensitizing the women and facilitating data collection.

Authors' Information

National Institute of Public Health

- Essis Esme Marie Laure, Koffi Kouassi Benjamin, Manouan N'guetta Mathilde, Coulibaly-Koné Soltié Aminata, Bamba Iba, kpebo Djoukou Olga Denise, Konan Loukou Leandres & Aka Joseph.

Reproductive Health Research Unit of Côte d'Ivoire

- Essis Esme Marie Laure, Koffi Kouassi Benjamin, Manouan N'guetta Mathilde, Coulibaly-Koné Soltié Aminata & kpebo Djoukou Olga Denise.

Department of Public Health and Biostatistics, Faculty of Medicine, Université Félix Houphouët Boigny

- Kpebo Djoukou Olga Denise & Aka Joseph.

Regional Health Directorate of La Me

- Coulibaly-Koné Soltié Aminata.

Bixby Center for Population, Health and Sustainability, school of public health, University of California, Berkeley

- Nola Prata.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] UNFPA (2021) Family Planning.
<https://www.unfpa.org/family-planning#readmore-expand>
- [2] EDS-CI (2012) Rapport Enquete Demographique et de Santé-Côte d'Ivoire.
- [3] Galle, A., Vermandere, H., Griffin, S., de Melo, M., Machaieie, L., Van Braeckel, D., *et al.* (2018) Quality of Care in Family Planning Services in Rural Mozambique with a Focus on Long Acting Reversible Contraceptives: A Cross-Sectional Survey. *BMC Women's Health*, **18**, Article No. 201. <https://doi.org/10.1186/s12905-018-0692-z>
- [4] Ntambue, A.M., Tshiala, R.N., Malonga, F.K., Ilunga, T.M., Kamonayi, J.M., Kazadi, S.T., *et al.* (2017) Use of Modern Contraceptive Methods in the Democratic Republic of the Congo: Prevalence and Barriers in the Health Zone of Dibindi, Mbuji-Mayi. *Pan African Medical Journal*, **26**, Article 199.
<https://doi.org/10.11604/pamj.2017.26.199.10897>
- [5] Dimassi, K., Douik, F., Douzi, M.A., Saidi, O. and Ben Romdhane, H. (2017) Les déterminants sociaux de l'utilisation des méthodes contraceptives en Tunisie. *Revue d'Épidémiologie et de Santé Publique*, **65**, 53-59.
<http://linkinghub.elsevier.com/retrieve/pii/S0398762016306812>
<https://doi.org/10.1016/j.respe.2016.06.330>
- [6] Gueye, A., Speizer, I.S., Corroon, M. and Okigbo, C.C. (2015) Belief in Family Planning Myths at the Individual and Community Levels and Modern Contraceptive Use in Urban Africa. *International Perspectives on Sexual and Reproductive Health*, **41**, 191-199. <https://doi.org/10.1363/intsexrephea.41.4.0191>
- [7] Ewerling, F., Victora, C.G., Raj, A., Coll, C.V.N., Hellwig, F. and Barros, A.J.D. (2018) Demand for Family Planning Satisfied with Modern Methods among Sexually Active Women in Low- and Middle-Income Countries: Who Is Lagging Behind? *Reproductive Health*, **15**, Article No. 42.
<https://doi.org/10.1186/s12978-018-0483-x>
<https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-018-0483-x>
- [8] Schwartz, S., Papworth, E., Thiam-Niangoin, M., Abo, K., Drame, F., Diouf, D., *et al.* (2015) An Urgent Need for Integration of Family Planning Services Into HIV Care: The High Burden of Unplanned Pregnancy, Termination of Pregnancy, and

- Limited Contraception Use among Female Sex Workers in Côte d'Ivoire. *Journal of Acquired Immune Deficiency Syndromes*, **68**, S91-S98.
<https://doi.org/10.1097/QAI.0000000000000448>
- [9] Ochako, R., Mbondo, M., Aloo, S., Kaimenyi, S., Thompson, R., Temmerman, M., *et al.* (2015) Barriers to Modern Contraceptive Methods Uptake among Young Women in Kenya: A Qualitative Study. *BMC Public Health*, **15**, Article No. 118.
<http://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-1483-1>
<https://doi.org/10.1186/s12889-015-1483-1>
- [10] Mamadou, K., Fomba, S., Tall, S., Alou, S., Mamadou, D., Ntchi, K., *et al.* (2020) L'Utilisation des Méthodes Contraceptives Modernes au Centre de Santé de Référence de la Commune VI du District de Bamako. *Health Sciences & Disease*, **21**, 82-86.
- [11] Haffeejee, F., Govender, N., Reddy, P., Sibiyi, M.N., Ghuman, S., Ngxongo, T., *et al.* (2018) Factors Associated with Unintended Pregnancy among Women Attending a Public Health Facility in KwaZulu-Natal, South Africa. *South African Family Practice*, **60**, 79-83. <https://doi.org/10.1080/20786190.2017.1396790>
- [12] Béné Bi Vroh, J., Tiembre, I., Attoh-Touré, H., Kouadio, D.E., Kouakou, L., Coulibaly, L., *et al.* (2012) Épidémiologie des avortements provoqués en Côte d'Ivoire. *Santé Publique*, **24**, 67-76. <https://doi.org/10.3917/spub.120.0067>
<http://www.cairn.info/revue-sante-publique-2012-HS-page-67.htm>
- [13] Denise, K.D.O., Odile Purifine, A.-T.S., A Joseph, A., Eugène, K.Y., Harvey, A.-T., Orsot, T.E. and N'Cho Simplicie, D. (2018) Correlates of Unintended Pregnancies in Ivory Coast: Results from a National Survey. *Science Journal of Public Health*, **6**, 6-14. <https://doi.org/10.11648/j.sjph.20180601.12>
- [14] Borges, A.L.V., dos Santos, O.A., Araújo, K.S., Gonçalves, R.F.S., Rosa, P.L.F.S. and de Nascimento, N.C. (2017) Satisfaction with the Use of Contraceptive Methods among Women from Primary Health Care Services in the City of São Paulo, Brazil. *Revista Brasileira de Saúde Materno Infantil*, **17**, 749-756.
<https://doi.org/10.1590/1806-93042017000400008>
- [15] Kotokou, K. (1994) Les facteurs de l'utilisation des méthodes contraceptives à Lomé. https://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_6/colloques2/39924.pdf
- [16] N'guessan, E., Gbeli, F., Dia, J.M. and Guie, P. (2019) Pratiques contraceptives des femmes infectées par le VIH suivies en ambulatoire au Centre Hospitalier Universitaire de Treichville (Abidjan, Côte d'Ivoire). *Pan African Medical Journal*, **33**, Article 79. <https://doi.org/10.11604/pamj.2019.33.79.16435>
<http://www.panafrican-med-journal.com/content/article/33/79/full/>
- [17] Abdel-Salam, D.M., Albahlol, I.A., Almusayyab, R.B., Alruwaili, N.F., Aljared, M.Y., Alruwaili, M.S., *et al.* (2020) Prevalence, Correlates, and Barriers of Contraceptive Use among Women Attending Primary Health Centers in Aljouf Region, Saudi Arabia. *International Journal of Environmental Research and Public Health*, **17**, Article No. 3552. <https://doi.org/10.3390/ijerph17103552>
- [18] Baiden, F., Mensah, G.P., Akoto, N.O., Delvaux, T. and Appiah, P.C. (2016) Covert Contraceptive Use among Women Attending a Reproductive Health Clinic in a Municipality in Ghana. *BMC Women's Health*, **16**, Article No. 31.
<http://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-016-0310-x>
<https://doi.org/10.1186/s12905-016-0310-x>
- [19] Gautier, A., Kersaudy-Rahib, D. and Lydié, N. (2013) Pratiques contraceptives des jeunes femmes de moins de 30 ans: Entre avancées et inégalités. *Agora Débats Jeunesses*, **63**, 88-101. <https://doi.org/10.3917/agora.063.0088>
<http://www.cairn.info/revue-agora-debats-jeunesses-2013-1-page-88.htm>

- [20] Matungulu, C.M., Kandolo, S.I., Mukengeshayi, A.N., Nkola, A.M., Mpoyi, D.I., Mumba, S.K., *et al.* (2015) Déterminants de l'utilisation des méthodes contraceptives dans la zone de santé Mumbunda à Lubumbashi, République Démocratique du Congo. *Pan African Medical Journal*, **22**, Article 329.
<http://www.panafrican-med-journal.com/content/article/22/329/full/>
<https://doi.org/10.11604/pamj.2015.22.329.6262>
- [21] Ugal, D.B. and Ushie, B.A. (2013) Contraceptive Use among Women in Ogoja and Obudu Local Government Areas, Cross River State, Nigeria. *African Population Studies*, **27**, 155-163. <http://aps.journals.ac.za/pub/article/view/437>
<https://doi.org/10.11564/27-2-437>
- [22] Salifou, K., Imorou, R.S., Vodouhe, M., Gounon, M.E., Hounkponou, F., Obossou, A., *et al.* (2018) Factors Associated with the Use of Modern Contraceptive Methods by Women of Childbearing Age in Parakou in 2017. *Open Journal of Obstetrics and Gynecology*, **8**, 521-530. <https://doi.org/10.4236/ojog.2018.85059>
- [23] Zah, B.T. (2010) Variations socio-économiques de la fécondité en Côte d'Ivoire: Quels groupes ont commencé à réguler leurs naissances? *Cahiers Québécois de Démographie*, **39**, 115-143. <http://id.erudit.org/iderudit/045058ar>
<https://doi.org/10.7202/045058ar>
- [24] Mbacké Leye, M.M., Faye, A., Diongue, M., Wone, I., Seck, I., Ndiaye, P., *et al.* (2015) Déterminants de l'utilisation de la contraception moderne dans le district sanitaire de Mbacké (Sénégal). *Santé Publique*, **27**, 107-116.
<http://www.cairn.info/revue-sante-publique-2015-1-page-107.htm>
<https://doi.org/10.3917/spub.151.0107>
- [25] Ndiaye, C.A.T., Delaunay, V. and Adjmagbo, A. (2003) Connaissance et utilisation des méthodes contraceptives en milieu rural Sereer au Sénégal. *Cahiers Santé*, 31-37.
- [26] Essis, E.M.L. (2021) Déterminants du recours aux méthodes contraceptives chez les femmes en âge de procréer du nord de la Côte d'Ivoire. *Afrique Biomédicale*, 92-101.
- [27] Congo, Z. (2005) Les facteurs de la contraception au Burkina Faso. Analyse des données de l'enquête démographique et de santé de 1998/99. Centre Population et Développement; Groupe International de Partenaires Population-Santé, Paris.
- [28] James-Hawkins, L., Dalessandro, C. and Sennott, C. (2019) Conflicting Contraceptive Norms for Men: Equal Responsibility versus Women's Bodily Autonomy. *Culture, Health & Sexuality*, **21**, 263-277.
<https://www.tandfonline.com/doi/full/10.1080/13691058.2018.1464209>
<https://doi.org/10.1080/13691058.2018.1464209>
- [29] Dereuddre, R., Buffel, V. and Bracke, P. (2017) Power and the Gendered Division of Contraceptive Use in Western European Couples. *Social Science Research*, **64**, 263-276. <https://doi.org/10.1016/j.ssresearch.2016.10.004>
<https://linkinghub.elsevier.com/retrieve/pii/S0049089X16306871>
- [30] Sekoni, O.O. and Oladoyin, V.O. (2016) Determinants of Family Planning Uptake among Men in Ibadan, Nigeria. *Journal of Community Medicine and Primary Health Care*, **28**, 38-44.
- [31] Koffi, T.B., Weidert, K., Ouro Bitasse, E., Mensah, M.A.E., Emina, J., Mensah, S., *et al.* (2018) Engaging Men in Family Planning: Perspectives from Married Men in Lomé, Togo. *Global Health: Science and Practice*, **6**, 317-329.
<http://www.ghspjournal.org/lookup/doi/10.9745/GHSP-D-17-00471>
<https://doi.org/10.9745/GHSP-D-17-00471>
- [32] Mboane, R. and Bhatta, M.P. (2015) Influence of a Husband's Healthcare Decision

- Making Role on a Woman's Intention to Use Contraceptives among Mozambican Women. *Reproductive Health*, **12**, Article No. 36.
<https://doi.org/10.1186/s12978-015-0010-2>
<https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-015-0010-2>
- [33] Stewart, M., Ritter, T., Bateson, D., McGeechan, K. and Weisberg, E. (2017) Contraception—What about the Men? Experience, Knowledge and Attitudes: A Survey of 2438 Heterosexual Men Using an Online Dating Service. *Sexual Health*, **14**, 533-539. <http://www.publish.csiro.au/?paper=SH16235>
<https://doi.org/10.1071/SH16235>
- [34] Balogun, O., Adeniran, A., Fawole, A., Adesina, K., Aboyeji, A. and Adeniran, P. (2016) Effect of Male Partner's Support on Spousal Modern Contraception in a Low Resource Setting. *Ethiopian Journal of Health Sciences*, **26**, 439-448.
<http://www.ajol.info/index.php/ejhs/article/view/144144>
<https://doi.org/10.4314/ejhs.v26i5.5>
- [35] Fennell, J.L. (2011) Men Bring Condoms, Women Take Pills: Men's and Women's Roles in Contraceptive Decision Making. *Gender & Society*, **25**, 496-521.
<http://journals.sagepub.com/doi/10.1177/0891243211416113>
<https://doi.org/10.1177/0891243211416113>
- [36] Prata, N., Bell, S., Fraser, A., Carvalho, A., Neves, I. and Nieto-Andrade, B. (2017) Partner Support for Family Planning and Modern Contraceptive Use in Luanda, Angola. *African Journal of Reproductive Health*, **21**, 35-48.
<https://doi.org/10.29063/ajrh2017/v21i2.5>
- [37] Mbarambara, P.M., Mumbilyia, E., Mututa, P.M. and Ndage, A.M. (2016) Niveau d'acceptabilité de la planification familiale dans la Zone de Santé de Kadutu à l'Est de la RD Congo [Acceptability Level of Family Planning in Kadutu Health Zone in East of DR Congo]. *International Journal of Innovation and Applied Studies*, **17**, 1190-1197.
- [38] Withers, M., Dworkin, S.L., Onono, M., Oyier, B., Cohen, C.R., Bukusi, E.A., *et al.* (2015) Men's Perspectives on Their Role in Family Planning in Nyanza Province, Kenya. *Studies in Family Planning*, **46**, 201-215.
<https://onlinelibrary.wiley.com/doi/10.1111/j.1728-4465.2015.00024.x>
<https://doi.org/10.1111/j.1728-4465.2015.00024.x>
- [39] Chiesa-Moutandou, S. and Wantou, G.T. (2001) Le comportement contraceptif des gabonaises. Les méthodes modernes: faible taux d'utilisation et déficit d'information. *Medecine d'Afrique Noire*, **48**, 191-198.

List of Abbreviations

MCM: modern contraceptive methods

FP: family planning

GH general hospitals

HIV: human immunodeficiency virus

DRC: Democratic Republic of the Congo

DECLARATIONS

Survey Form

Health facility:

Name of Investigator:

Number: - |__|__|| Date: / /

I. GENERAL INFORMATION (Socio-demographic)

1. Age |__| years or Date of birth

2. A positive answer to any of these questions will exclude the woman from the study

- Do you want a child in the next two years? No |__| Yes |__|

- Are you sterilized (IUD, tubal ligation, infertility)? No |__| Yes |__|

3. Education level:

None-educated |__| Primary |__| Secondary |__| Higher education |__|

4. Marital status:

Single |__| Married |__| Divorced |__| Widowed |__| Cohabiting |__|

Common-law |__| Separated |__|

5. Region of origin:

6. Occupation:

7. Economic level (monthly income): <50.000 Fcfa |__| [50.000 - 200.000 Fcfa] |__| >200.000 Fcfa |__| Other |__| To be specified

8. What religion do you belong to?

Muslim |__| Catholic |__| Protestant |__| Evangelical |__| Animist |__|

9. Do you use a current modern contraceptive method? No |__| Yes |__|

If No, go to II.A, but if Yes, go to II.B

II.A. FAMILY PLANNING KNOWLEDGE

10. Have you ever heard of FP? Yes |__| No |__|

11. If yes, what is it?

12. Are there any benefits to FP? Yes |__| No |__|

12.1. If yes, list the ones you know of:

13. Have you ever heard of a contraceptive method? Yes |__| No |__|

13.1. If yes, what modern contraceptive method do you know?

Female sterilization |__| Male sterilization |__| Pill |__| IUD/IUD |__| Injections |__| Implants/Norplants/Jadelle |__| Male condom |__| Female condom |__| Spermicide |__| Morning-after pill |__| Vasectomy |__| Other |__|

14. Have you ever used a contraceptive method? Yes |__| No |__|

- 14.1. If yes, who initiated it? Spouse Me Other Please specify
- 14.2. What contraceptive method did you use? Modern Traditional
Why?
- 14.3. For what reasons did you use it? To avoid an STI To avoid pregnancy Don't know Other
- 14.4. For what reasons did you stop using it?
15. How many children do you want to have?
16. How many children have you had before?
17. How old is your last child?
18. Would you like to have a child in the next two years? Yes No
19. Do you discuss sexual issues with your partner? Yes No
- 19.1. If not, why not?
20. Do you discuss family planning with your partner? Yes No
- 20.1. If no, why not?
21. What is your husband's opinion of family planning?

II.B. FAMILY PLANNING KNOWLEDGE

- 10.1. How long have you been using contraception?
- 10.2. Who took the initiative? Spouse I Other Please specify
- 10.3. What modern contraceptive method do you use? Female sterilization Male sterilization Pill IUD/IUD Injections Implants/Norplants/Jadelle Male condom Female condom Spermicide Morning-after pill Vasectomy Other
- 10.4. For what reasons do you use contraception? To avoid an STI To avoid pregnancy Don't know Other
11. Have you ever heard of FP? Yes No
- 11.1. If yes, what is it?
- 11.2. Are there any benefits to FP? Yes No
- 11.3 If yes, list the ones you know of:
- 11.4. If No, what are the disadvantages of FP?
- 11.5. Do you discuss family planning with your partner? Yes No
- 11.6. If no, why not?
- 11.7. What is your husband's opinion of family planning?
12. How many children do you want to have?
13. How many children have you already had?
14. How old was your last child?
15. Do you discuss sexual issues with your partner? Yes No If no, why not?

III. BARRIERS TO CONTRACEPTIVE USE

16. What difficulties do you experience in accessing family planning services?
- 16.1. Where are these modern contraceptive methods found?
- 16.2. For what reasons are contraceptive methods used? To avoid an STI To avoid pregnancy Don't know Other
- 16.3. What do you think is the target population for family planning? Youth

Students Married women Unmarried women Women of childbearing age Household women Other Please specify

17. Are you sure you can demand a condom during sex? Yes No
Why?

18. Are you sure you can initiate contraception in your relationship? Yes
No Why?

19. Do you think that regular contraceptive use is the sole responsibility of the wife or husband? Yes No Why?

20. Who do you think is the target population for family planning? Youth Students Married women Unmarried women Women of childbearing age Household women Other Please specify

21. Have you had any unwanted pregnancies? Yes No

21.1. if Yes, how many times

22. Have you had an abortion for unwanted pregnancies? Yes No

22.1. If yes, how many times?

23. What suggestions do you have for improving the use of family planning services by adolescents?

24. Do you experience pressure from others not to use contraceptive methods? Yes No

24.1. If yes, who are these people? Spouse/Boyfriend Father/Mother Grandparents Sibling Friends Religious leader Health worker Teacher Others Please specify

24.2. For what reasons?

25. Have you ever visited a health facility or consulted a health worker for services or information regarding contraceptive methods, family planning, pregnancy, or sexually transmitted diseases? Yes No

26. Have you attended an information session on contraceptive methods? Yes No

27. Do you believe that condoms are effective in protecting against pregnancy/STI/HIV? Yes No If no, why not?

28. Do you believe that married couples/people should use condoms? Yes No If no, why not?