

# The Use of Modern Contraception after Childbirth in an Urban Health Center in Bangui, CAR

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## Abstract

**Introduction:** The use of modern postpartum contraception not only reduces unplanned pregnancies but also improves the well-being of mother and child. The present study aims to identify the determinants of postpartum contraceptive use in a first level health facility. **Methodology:** This was a 6-month cross-sectional study conducted at the Urban Health Center of Castors. Postpartum women who presented within 42 days of delivery and who had a live child were included after informed consent. **Results:** Of 318 women enrolled during the study period, 106 were currently using a modern contraceptive method, for a prevalence of 33.3%. The mean age of the women was 25.3 years ( $\pm 3.6$ ), with extremes of 14 and 49 years. The age group [20 to 29] was the most represented with 52.8%. More than half of the women were in couples (54.7%) and had completed secondary education (53.8%). These women were mostly students (42.5%) and primiparous or pauciparous (70.7%). The most used contraceptive method was injectables (depot medroxyprogesterone acetate) (43.4%), followed by male condoms (23.6%) and oral contraceptives (17.9%). The unmet need for contraception was 40.6%. The main reasons for non-use were the desire to have more children (41.5%), fear of side effects (34.9%) and spousal opposition (12.3%). Factors associated with contraceptive non-use were educational level, occupation and parity. **Conclusions:** The rate of modern contraceptive use in the postpartum period is low in the study population. Interventions to increase the use of effective contraceptive methods are needed, especially among young women.

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## Keywords

Contraception, Post-Partum, CSU-Castors

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### 1. Introduction

One of the key strategies for reducing maternal and child mortality is family planning (FP). It allows birth spacing and makes it possible to avoid early and unwanted pregnancies which carry a high risk of maternal morbidity and mortality [1]. FP can prevent more than 30% of maternal deaths and 10% of infant mortality if couples space pregnancies at two years or more [1] [2]. Despite the undeniable progress made in recent decades, contraceptive practice remains low in sub-Saharan Africa. Indeed, across all countries, the median contraceptive prevalence rate (CPR) among women of childbearing age barely reached 28% in 2015 [3]. Unmet need for family planning (BNSPF) is highest in Africa. Indeed, the proportion of unmet needs (BNS) is 24.8% there compared to 12.7% in South-East Asia, and 8.3% in America [4]. According to the WHO, the best time to reduce these unmet needs is the postpartum period since a woman's contact with health services is particularly frequent during pregnancy, childbirth and the first year of a child's life [5].

In the Central African Republic (CAR), data relating to reproductive health remains worrying. The total fertility index is 6.2 in 2018, modern contraceptive prevalence remains low at 9.3% and the maternal mortality ratio is equal to 882 deaths per 100,000 live births and 31.25% of deaths are due to complications of abortions [6]. Given the demonstrated need for postpartum contraception and the potential to improve maternal and child outcomes, there is a clear need to integrate it into maternal and child health programs [5]. The present study aims to identify the determinants of postpartum contraceptive use in a first-level health facility. Specifically, this will involve

- Determine the proportion of women who have benefited from modern contraception postpartum.
- Describe the contraceptive methods most used by clients.
- Identify factors associated with non-use of contraception postpartum.

### 2. Methods

We conducted an analytical cross-sectional study from April 1 to September 30, 2022, *i.e.* 6 months, at the Castors Urban Health Center, located in the Bangui 2 health district. Our study focused on postpartum mothers, up to 42 days postpartum, with a live baby, who came for a postpartum consultation at the postpartum consultation unit or who brought their children for the first dose of PENTAVALENT vaccine during the study period. We opted for a comprehensive survey. All women who met the selection criteria and gave informed consent were included. The survey was conducted in a strictly confidential manner. Informed consent

was obtained from participants prior to each interview. The interviews were conducted in French and Sangho (mother tongue) and lasted on average 10 to 15 minutes for each woman.

The variables studied were:

- Independent variable: non-use of contraceptive methods.
- Dependent variables:
  - ✓ Sociodemographics: Age, marital status, educational level, number of pregnancies, number of births.
  - ✓ Contraceptive practice: type of contraception used, reasons for not using a contraceptive method.

To collect the data, we interviewed the women for an average of ten (10) minutes. The instrument used was a pre-designed and pre-tested individual questionnaire. The data were entered and analyzed using Epi info.7 software. The Chi<sup>2</sup> test of independence was used to compare proportions. For each level of significance  $p < 0.05$ , we concluded that there was a statistically significant association between the dependent variable and the independent variables. Associated factors were identified by bivariate analysis between the dependent and independent variables. Measures of association were estimated by odds ratio (OR) and its 95% confidence interval (CI).

### 3. Results

#### 3.1. Sociodemographic Parameters

During the period of our study, 318 women were enrolled. The average age of the women was 25.3 years ( $\pm 3.6$ ), with extremes of 14 and 49 years. The age group of [20 to 29 years] was the most represented with 52.8%. Women in a relationship represented 54.7%. They had reached the secondary education level in 53.8%. These women were 42.5% pupils/students and 70.7% primiparous or pauciparous (Table 1).

**Table 1.** Distribution of women according to socio-demographic parameters.

Items	Number (n = 318)	Percentage
<b>Age groups</b>		
≤19 years old	48	15.1
[20 to 29 years old]	168	52.8
[30 years and over]	102	32.1
<b>Marital status</b>		
Married/common law	174	54.7
Bachelor	144	45.3
<b>Educational level</b>		
None	36	11.3
Primary	45	14.2

**Continued**

Secondary	171	53.8
Superior	66	20.7
<b>Occupation</b>		
Pupil/Student	135	42.5
Shopkeeper	78	24.5
Housewife	87	27.3
Public/private worker	18	5.7
<b>Parity</b>		
Primiparous/Pauciparous	225	70.7
Multiparous	93	29.3

**3.2. Use of Contraception**

A low proportion of 33.3% of women used modern contraception. The most used method was the injectable form (depot medroxyprogesterone acetate or DMPA) with 43.4% followed by the male condom at 23.6%. Implants are only used in 13.2%. A high proportion of 55.7% used contraceptive methods for birth limitation and very few (13.2%) for birth spacing. The reasons for non-use of contraceptive methods mentioned in our series were represented by the desire for motherhood at 41.5% and the fear of side effects at 34.9% (Table 2).

**Table 2.** Distribution of women according to use or not of contraceptive methods and their reasons.

Items	Effective	Percentage
<b>Current contraceptive use</b>	<b>(n = 318)</b>	
Yes	106	33.3
No	212	66.7
<b>Methods used</b>	<b>(n = 106)</b>	
Implant	14	13.2
DMPA	46	43.4
Male condom	25	23.6
Oral contraception	19	17.9
Tubal sterilization	2	1.9
IUD	0	0.0
<b>Reason for use</b>	<b>(n = 106)</b>	
Limiting pregnancies	59	55.7
Birth spacing	14	13.2
Others	33	31.1
<b>Reason for non-use</b>	<b>(n = 212)</b>	
Desire to have more children	88	41.5

**Continued**

Fear of side effects	74	34.9
Spousal opposition	26	12.3
Lack of knowledge of the place of supply	10	4.7
Religion, fear of infertility after use, modification of morphology	14	6.6

**3.3. Factors Influencing Contraceptive Use**

Bivariate analysis showed that age and marital status did not influence contraceptive use. However, certain parameters were significantly associated with non-use of contraceptive methods among postpartum women: no education (OR = 5.3 [2.12 - 13.62],  $p = 0.000$ ), occupation student (OR = 7.7 [2.56 - 23.25],  $p = 0.000$ ), pauci parity (OR = 19 [10.38 - 38.08],  $p = 0.000$ ) (**Table 3**).

**Table 3.** Distribution of women according to factors associated with non-use of contraceptive methods.

Explanatory variables	Use of PF in PP		OR [IC]	p-value
	Yes (%)	No (%)		
<b>Age groups</b>				
≤19 years old	19 (39.58)	29 (60.42)	1	
[20 to 29 years old]	57 (33.93)	111 (66.07)	1.2 [0.65 - 2.47]	0.4
[30 years and over]	30 (29.41)	72 (70.59)	1.5 [0.76 - 3.22]	0.2
<b>Marital status</b>				
Married/common law	60 (34.48)	114 (65.52)	1	
Bachelor	46 (31.94)	98 (68.06)	1.12 [0.7 - 1.79]	0.6
<b>Educational level</b>				
Superior	40 (60.61)	26 (39.39)	1	
Secondary	45 (26.32)	126 (73.68)	4.3 [2.36 - 7.84]	0.001
Primary	13 (28.89)	32 (71.11)	3.7 [1.68 - 8.52]	0.001
None	8 (22.22)	28 (77.78)	5.3 [2.12 - 13.62]	0.000
<b>Occupation</b>				
Public/private worker	13 (72.22)	5 (27.78)	1	
Shopkeeper	26 (33.33)	52 (66.67)	5.2 [1.67 - 16.15]	0.002
Housewife	33 (37.93)	54 (62.07)	4.2 [1.39 - 13.02]	0.007
Pupil/Student	34 (25.19)	101 (74.81)	7.7 [2.56 - 23.25]	0.001
<b>Parity</b>				
Multiparous	67 (72.04)	26 (27.96)	1	
Primiparous/Pauciparous	39 (17.33)	186 (82.67)	12.3 [6.95 - 21.71]	0.001

## 4. Discussion

### 4.1. Study Limitations

- Very short study duration, which does not allow for more participants.
- Men are not included among the participants.
- Religious aspects are not considered in this study.

### 4.2. Sociodemographic Parameters

**Age:** We found among users of modern contraceptive methods a high proportion of women aged between 20 and 29 years (52.8%). Adolescent girls  $\leq 19$  years old represented only 15.1%. Several authors in Africa have made the same observation [4] [7]. These data suggest that postpartum family planning programs should prioritize providing care to young mothers, for whom delaying a subsequent pregnancy could potentially save lives.

**Marital status:** The proportion of women in a union was slightly higher (54.7%) in our series compared to single women. Other authors have made the same observation [7]. In the social context of the CAR, common-law union is not considered a scandal in society.

**Level of education:** More than half of the women in our series had reached secondary level (53.8%) followed by higher education (20%). We can deduct from these results that the schooling of girls would be a determinant of the use of modern contraception. This situation has also been observed by many authors [4] [7] [8].

**Profession:** In our series, we found a higher proportion among women who did not carry out an income-generating activity. This result could be linked to the location of the survey on the one hand and on the other hand to the free contraceptive methods in public health centers in CAR. However, several authors claim the opposite result. According to the latter, financial accessibility would still be a determining factor in the use of modern contraception [3] [4].

### 4.3. Practice of Methods Contraceptives Modern by Customers

**Prevalence:** The rate of use of FP services in our series is 33.3%. This high modern contraceptive prevalence in our study compared to the general population (9.3%) [6] could be due to the specificity of this period. Indeed, the postpartum period is a favorable period for contraceptive use, as there are multiple contacts between women and health care providers when seeking child immunization services or when they go for a post-natal consultation. Several African authors have reported prevalences greater than 50% postpartum, particularly in Cameroon (57.4%), Kenya (86.3%) and Zambia (73.5%) [7] [9]-[11]. This difference would be linked on the one hand to the methodology adopted. While for us this was a cross-sectional study over a short period, the other studies focused on a longer period between 12 to 24 months, with the possibility of recruiting more women who will adopt a contraceptive method. And on the other hand, it must be said that the majority of African women think that before the return of childbirth, contraceptives are not necessary due to the woman's infertility at this period [12].

Additional efforts are needed for women to understand that pregnancy is possible in the postpartum period, even before the return of childbirth.

**The use of contraceptive methods:** In this study, the use of the injectable form (depot medroxyprogesterone acetate (DMPA-) 43.4% and male condoms 23.6% was relatively high compared to other methods. This result does not reflect national trends which have shown that women prefer oral contraception more than other modern contraceptive methods [6]. With the profile of the women in our series (young, pupils, students or even housewives), they could not have the power of decision, and also the capacity to respect the prescriptions with regard to oral contraception. In contrast, our results corroborate with the Demographic and Health Survey (DHS) of 21 low- and middle-income countries, which showed that women who adopt modern contraceptive methods after childbirth are more likely to opt for injectable hormonal methods [13]. Furthermore, the rate of use of long-acting methods such as implants is relatively low and zero for intrauterine devices (IUDs). It is recognized that long-acting reversible contraceptives such as the implant and IUDs are the most effective methods to prevent unwanted pregnancies, especially in women who wish to use a contraceptive device to delay the next pregnancy [14]. The lack of use of the IUD and the low use of implants postpartum in our study population could be linked on the one hand to insufficient training of midwives on its insertion in our context and on the other hand, part of the non-availability of these. This suggests that there is a need to improve the quality of services.

**Reason for non-use of modern contraceptive methods postpartum:** These were related to the desire to have more children, fear of side effects and opposition from the spouse. Similar observations have been made by several authors in Africa [15] [16]. Fear of side effects is probably linked to false rumors about the impact these methods would have on future conception. Women generally perceive that modern contraceptive methods are likely to cause cycle disorders which could hinder their future fertility. The opposition from spouses was probably the result of a service that was too focused on women.

#### 4.4. Factors Influencing the Use of Modern Contraceptive Methods

**Age and use of a modern contraceptive method in the Postpartum:** It is generally accepted that contraceptive practice varies with the sociodemographic characteristics of the woman. However, about age, most studies conducted among women of childbearing age did not find a statistically significant influence between age and the use of a modern contraceptive method [17]. In our series, it appears that the proportion of women surveyed who used a modern contraceptive method was similar in all age groups without any statistically significant difference ( $p = 0.41$ ). Which corresponds to data from the literature [8] [17].

**Marital situation and use of a modern contraceptive method in the postpartum period:** As reported by Mbacké [16], our study did not find a statistically significant difference between contraceptive practice and the marital status of those giving birth. Indeed, the proportion of women surveyed having used a

modern contraceptive method was higher among women living as a couple (married and cohabiting) than those living alone without a statistically significant difference ( $p = 0.6$ ).

**Level of education and use of a modern contraceptive method in the postpartum period:** We noted that the proportion of users of a modern contraceptive method in the postpartum period was higher among those having reached at least the higher level with a statistically significant difference ( $p < 0.05$ ). Indeed, less educated women have on average four (4) times the risk of not using a modern contraceptive method. It must be said that the level of education of women is closely linked to the use of contraceptive methods. Even after accounting for other factors, researchers consistently found that more educated women were more likely to use contraception [8] [17] [18]. Schooling is therefore an important determinant of the use of modern contraception. It thus clearly appears that the education of girls constitutes a strategic axis for raising awareness of the use of modern contraceptive methods. Schools could also use these valuable channels to pass messages on sexual and reproductive health to adolescents.

**Profession and use of a modern contraceptive method in the Postpartum:** Contraceptive practice also depends on the standard of living of women. It emerges from this work that the existence of a stable economic activity has a statistically significant link with the use or not of a modern contraceptive method ( $p < 0.05$ ). Even if the offer of contraception is free in public health centers in the CAR, financial accessibility to services linked to indirect costs (transport, health record, purchase of consumables, etc.) would be a determining factor in the use of modern contraception. Mbacké in Senegal [17] made the same observation. However, we did not study the average income of the respondents. Indeed, although the person carries out an income-generating activity, there is no guarantee that their income is equal to their health expenses.

**Parity and use of a modern contraceptive method in the postpartum period:** A link has been established between the number of children and the use of modern contraception [18]. This work highlighted a high proportion of users of a modern contraceptive method in the postpartum period among multiparous women (80.72%) than among primiparous/pauciparous women and with a statistically significant difference ( $p < 0.05$ ). Primiparous/pauciparous women have 19 times the risk of not using a modern contraceptive method. This could be explained by the fact that the more parity increases, the more women want to limit pregnancy. There is thus a correlation between the number of living children a woman has and her probability of using a modern contraceptive method. For Abel [15] in the Democratic Republic of Congo, women begin to be interested in modern contraceptive methods when the current number of children approaches the ideal number of children desired.

## 5. Conclusion

The present study showed a low prevalence of contraceptive use postpartum (33.3%).

The reasons given by women for not using PFPP services were for the most part the desire to have another child, a lack of information resulting in fear of side effects without forgetting the opposition of the spouse. Factors such as education, occupation, and parity influenced the use of PFPP services. It is now necessary to place emphasis on information and communication for behavior change. This involves promoting FP activities centered on the couple, education and empowerment of women.

### Author Contributions

Doyama-woza Rodrigue Herman and Songo-kette Gbekere Thibaut Clavaire designed the study.

Doyama-woza Rodrigue Herman, Songo-kette Gbekere Thibaut Clavaire and Mbano-Dede Matike-Ayamboka Kely were involved in data collection and analysis.

All authors participated in proofreading the final version of the manuscript and contributed significantly to its content and to the management of the preparation of the manuscript. All authors read and approved the final version of the manuscript.

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### Conflicts of Interest

The authors declare on their honor that the submission and publication of this manuscript presents no conflict of interest.

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