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Use of contraceptive methods in rural areas in cote d'ivoire: a cross-sectional study

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Abstract

Objective: To analyze the factors associated with the use of contraceptive methods in rural areas.

Patients and methods: This cross-sectional survey took place in May, 2018 in Kodjokro, a village in the south-east of Côte d'Ivoire. The study population consisted of women of reproductive age, from 15 to 49 years old. A questionnaire was used to collect data on socio-demographic, gyneco-obstetrical characteristics, knowledge and attitudes and he use of contraceptive methods. The chi-square test was used to measure the associations between the use of contraceptive methods and each of the characteristics studied.

Keywords: Contraception, Côte d'Ivoire, Women of reproductive age, Rural area, use

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Results:

We recruited 77 women of average age 26.91 ± 8.02 years. These women mostly in a couple (66.23%), most often husband occupation is farming (56.86%) and with no formal education (40.26%). One in two women talked about contraception with their partner. Contraceptive prevalence was estimated at 19.48%. The main methods used were traditional methods (53.33%).

Contraceptive method use was significantly associated with spouse's occupation and talking about contraception with their spouses. Women whose spouses are not farmers used contraception 7.71 times more [OR=7.71 (1.66-55.93, p= 0.017)]. Those who discussed contraception with their spouses used them 5.54 times more [OR = 5.54 (1.57-26.13, p = 0.013)].

Conclusion:

The use of contraception was low and influenced by the discussion with the partner and his profession. Therefore, it is necessary for family planning programs to redirect and intensify awareness of all contraceptive methods for couples in the rural communities.

Introduction

The use of modern contraceptive method contributes to the improved health and well-being of women and their families. It reduces maternal and infant mortality and morbidity (1;2). Indeed, pregnancy and childbirth can threaten the life of a woman and that of the child, especially in the absence of adequate prenatal and obstetrical care (3).

According to the WHO, in 2015, the majority of maternal deaths (99%) occurred in low-income countries, most of which could have been avoided. The high level of these deaths reflects inequalities in access to health services, particularly between rural and urban populations (4).

However, in 2019, less than half of family planning needs were met in Africa south of the Sahara (5). In addition, the rate of contraceptive use in this region was low, estimated at 15.1% (6).

Côte d'Ivoire is not left out with low contraceptive prevalence, estimated at 20% in 2011 and a high maternal mortality rate, estimated at 614 deaths per 100,000 live births. Indeed, there are

inequalities between rural and urban areas with contraceptive prevalence of 15% and 23% respectively (7).

Several factors explain the low use of modern contraceptive methods (8;9). However, the explanatory factors for the use of all contraceptive methods (modern, natural and traditional) are poorly elucidated in the literature.

In addition, there are few data regarding contraception in rural areas in Côte d'Ivoire. This motivated this study in a village in the health district of Adiaké, in the south-east of Côte d'Ivoire. The activity report of the Adiaké health district in 2018 revealed a very low modern contraceptive prevalence (3%), far from the national rate in rural areas (10%).

The objective of the study was to analyze the factors associated with the use of contraceptive methods in rural areas.

Patients and Methods

Study design and setting

This was an analytical cross-sectional survey that took place from May 1st to 31st, 2018 in Kodjokro. It is a village located in the Tiapoum region, in the south-east of Côte d'Ivoire, 186 km from Abidjan. In 2014, the village had 766 inhabitants, including 114 women of reproductive age. The organization of the village is based on the traditional mode. The main activities of the village community are based mainly on agriculture, commerce and artisanal fishing. The nearest health centers are located 5 and 7 km away respectively, in the villages of Edjambo and Frambo (10).

Participants

The study population consisted of all women of reproductive age, from 15 to 49 years old, residing for more than six months in the village and having agreed to participate in the study. Adolescent girls whose legal guardians agreed to participate were also included in the study. Pregnant women were not taken into account.

Collection of data

Data collection was carried out using a pre-tested questionnaire completed by three interviewers. The survey was carried out based on the door-to-door strategy.

The data collected focused on:

- Sociodemographic variables: age, marital status, type of union, level of education, religion, wife and husband occupation.

- Gyneco-obstetrical variables: age at first sexual intercourse, gestation, parity, consultation in a gynecology and family planning unit.

- Knowledge of contraceptive methods: this was assessed in two stages. The first consisted in letting the interviewees spontaneously cite the methods they knew. Then for the second stage, the interviewers described to the respondents the contraceptive methods not mentioned in the first stage to ensure that they knew them or not. Women should first recognize the products they have heard of or use. The modalities of knowledge were: the possibility of hearing about contraceptive methods, knowledge of a contraceptive method and of a place of procurement of contraceptive methods. Thus, we had defined that a woman knew a contraceptive method if she could cite it spontaneously or recognize it after description by the interviewer.

- Women's attitudes about contraception: this referred to the fact of talking about contraception with their partner.

- Use of contraception: this was the use of contraception at the time of the survey (current use of contraception) and the type of contraceptive method chosen.

Data analysis

Data were entered using Epidata 3.1 software and analyzed using Rstudio software version 1.1.447 (https://www.rstudio.com). Each variable was subjected to a descriptive analysis. The search for factors associated with the current use of contraception was done using the chi-square test (or, where appropriate, Fisher's exact test). A value of $p < 0.05$ was considered indicative of a statistically significant association.

Ethical considerations

The research protocol was validated by the scientific committee of the Faculty of Pharmaceutical and Biological Sciences, Training and Research Unit (UFR). Then, we obtained the authorization of the community leader (the head of the neighborhood) as well as the oral and informed consent of the women of reproductive age. The data collected respected confidentiality and anonymity.

Results

Sociodemographic characteristics

Seventy-seven (77) women agreed to take part in the survey out of a total of 85 contacted, which gives a response rate of 90.59%. The mean age was 26.91±8.02 years. More than 46% of them were under 25 years old. These women were mostly in a couple (66.23%) and had no formal education (40.26%). About two out of three women were traders and their husbands were more often farmers (56.86%).

Gyneco-obstetric characteristics

Three out of four women (75.32%) had their first sexual intercourse during adolescence. Most of the women were multigravida (29.87%) and pauciparous (36.36%). About two out of three women did not consult a gynecologist or visit a family planning service.

The sociodemographic and gyneco-obstetrical characteristics of the women are presented in **Table I A, I B**.

Table I A: Sociodemographic and gyneco-obstetrical characteristics

Caracteristics	Number	Percentage
Age		
- 15-19	18	23.38
- 20-24	18	23.38
- 25-29	14	18.18
- 30-34	13	16.88
- 35-39	7	9.09
- 40-44	7	9.09
Marital status		
- As a couple	51	6.23
- Single	26	33.77
Type of union (N=51)		
- Monogamy	42	82.35
- Polygamy	9	17.65
Level of education		
- No schooling	31	40.26
- Primary school	24	31.17
- Secondary school	20	25.97
- Higher education	2	2.60
Religion		
- Christian	58	75.32
- Muslim	16	20.78
- Animist	3	3.90
Occupation of the woman		
- Trader	53	68.83
-Housewife	11	14.28
-Student	10	12.99
- Others*	3	3.90
Occupation of spouse (N=51)		
- Farmer	29	56.86
- Laborer	13	25.5
- Trader	5	9.8
- Civil servant	2	3.92
- Unemployed	2	3.92

Table 1.B Gyneco-Obstetric Characteristics

Caracteristics	Number	Percentage
Age at first sexual intercourse (years)		
- 10-14	9	11.68
- 15-19	58	75.32
- 20 et plus	10	12.00
Gesture		
- Multi-gesture	23	29.87
- Paucigest	22	28.57
- Nulligest	16	20.78
- Primigest	11	14.28
- Great multi-gesture	5	6.50
Parity		
- Pauciparous	28	36.36
- Nulliparous	20	25.97
- Multipara	18	23.38
- Primiparous	9	11.69
- Grand multiparous	2	2.60
Gynecological consultation		
- No	47	61.04
- Yes	30	38.96
Consultation at a family planning service		
- No	50	64.94
- Yes	27	35.06

***** (Dressmaker=1, hairdresser=1, care assistant=1)

Knowledge and attitudes about contraceptive methods

Many of them had already heard of contraceptive methods (93.51%) and knew at least one (96.10%). Most of them knew where to get it (81.81%). One woman out of two discussed contraception with her spouse (**Table II**).

Table II: Knowledge and use of contraceptive methods

Caracteristics	Number	Percentage
Heard about contraceptive methods		
- Yes	72	93.51
- No	5	6.49
Knowledge of a contraceptive method		

- Yes	74	96.10
- No	3	3.90
Awareness of a location where you can get contraception		
- Yes	63	81.82
- No	14	18.18
Discuss contraceptive methods with partner		
Yes	39	50.65
No	38	49.35
Use of contraceptive methods		
- Yes	15	19.48
- No	62	80.52
Type of contraceptive used (N=15)		
- Condom	4	26.67
- Injectable contraceptive	3	20.00
- Pills	6	40.00
- Traditional method	8	53.33

Use of contraceptive methods

Contraceptive prevalence was estimated at 19.48% (**Table 2**). The methods used were traditional methods (53.33%), oral contraceptives (40%), condoms (26.67%) and injectable contraceptives (20%) (**Table II**).

Factors associated with contraceptive use

Factors associated with contraceptive use are presented in **Table III.** The use of contraceptive methods was significantly associated with the spouse's occupation (p=0.017) and with the fact that women discussed contraception with their spouses (p=0.018). Women whose husbands are not farmers used contraception 7.71 times more. Those who discussed contraception with their spouses used them 5.54 times more.

Table 3: Factors associated with contraceptive use

Caracteristics	Utilisation		Or ($Ic_{95\%}$, P)
	No N (%)	Yes N (%)	
Socio-Demographic Characteristics			
Age			
- 15-29	35 (56.45)	10 (66.67)	1.54 (0.47-5.05, p=0.471)
- 30-44	27 (43.54)	5 (33.33)	Réf
Marital status			
- As a couple	41 (66.13)	10 (66.67)	Réf
- Single	21 (33.87)	5 (33.33)	0.98 (0.27-3.13, p= 0.968)
Type of union (N=51)			
- Monogamy	35 (85.37)	7 (70.00)	Réf
- Polygamy	6 (14.63)	3 (30.00)	2.50 (0.45-12.20, p=0.263)
Level of education			
- Not educated	28 (45.16)	3(20.00)	Réf
-Educated	34 (54.84)	12 (80.00)	3.29 (0.94-15.51, p=0.08)
Religion			
- Not Christian	16 (25.80)	3 (20.00)	Réf
- Christian	46 (74.20)	12 (80.00)	1.39 (0.38-6.67, p=0.641)
Woman's occupation			
- Traders	43 (69.35)	10 (66.67)	Réf
- Other occupations	19 ((30.64)	5 (33.33)	1.13 (0.32-3.67, p=0.840)
Occupation of spouse			
- Other occupations	14 (34.15)	8 (80.00)	7.71 (1.66-55.93, p= 0.017)
- Farmer	27 (65.85)	2 (20.00)	Réf
Gyneco-Obstetric Characteristics			
Age at first sexual intercourse			
- < 20 yrs	55 (88.71)	12 (80.00)	Réf
- ≥ 20 yrs	7 (11.29)	3 (20.00)	1.96 (0.38-8.26, p= 0.374)
Gesture			
- ≤ 1	42 (67.74)	8 (53.33)	1.84 (0.57-5.84, p= 0.298)
- > 1	20 (32.26)	7 (47.67)	Réf
Parity			
- ≤ 1	21 (33.87)	8 (53.33)	2.23 (0.71-7.20, p= 0.169)
- > 1	41 (66.13)	7 (46.67)	Réf
Consultation at a FP service			
- No	39 (62.90)	11 (73.33)	1.62 (0.49-6.39, p= 0.450)
- Oui	23 (37.10)	4 (26.66)	Réf

Awareness of a place where you can get contraception			
- No	13 (20.97)	1 (6,67)	Réf
- Yes	49 (79.03)	14 (93.33)	3.71 (0.65-70.38, p= 0.225)
Discuss about contraception with your partner			
- No	36 (58.06)	3 (20.00)	Réf
- Yes	26 (41.94)	12 (80.00)	5.54 (1.57-26.13, p= 0.013)

Discussion

Côte d'Ivoire is one of the countries in sub-Saharan Africa where contraceptive practice remains low despite high maternal mortality (7). The study carried out in the village of Kodjokro in the south-eastern region of the country has highlighted some explanatory factors for the low use of contraceptive methods in rural areas. Nevertheless, it is a study that has limitations since it was restricted to a single village. This is explained by the fact that it was a pilot study which was carried out within the framework of a project called Community Healthcare Engagement (CHE) of the department of public health and toxicology of the Faculty of Pharmaceutical sciences and biology from Félix Houphouët Boigny University (UFHB). However, the results obtained make it possible to supplement existing national data on reproductive health.

Our results showed that the majority of women were young. Young populations were also found in the studies of Mohamed in Ethiopia (average age: 29.49 years) (11). Young women are the target of family planning programs; those in rural areas should benefit from the various awareness campaigns in the same way as their counterparts in urban areas.

Most women had their first sexual intercourse in adolescence, this is due to the fact that they were in a relationship early. Sidibé describes it in his study where 60% of adolescent girls had sexual relations (12). On the other hand, they were reluctant to visit family planning and gynecology services. This could expose them to unwanted pregnancies and septic abortions. A study carried out by Vroh in Côte d'Ivoire showed that 40% of abortions occurred in rural areas (13).

Indeed, many women knew about contraceptive methods. But only half could discuss it with their partner. Author like Asut also reported this fact (14).

As for the use of contraceptive methods, contraceptive prevalence was low (19.48%) but higher than the result obtained during the 2012 Demographic and Health Survey (DHS) which was 10% in rural areas (7). This is explained by the fact that the survey was limited to a single village in the health district while the DHS was on a national level. Similar results were obtained by Baranon in Benin where contraceptive use was very low (6.29%) (15).

Regarding the factors associated with the use of contraceptive methods, the results showed that women whose spouses are not farmers used contraceptive 7.71 times more. Those who discussed contraceptive methods with their spouses used them 5.54 times more. These results corroborate those obtained by Mutungulu in the DRC. He showed that women who discussed family planning with their partners more often were more likely to use contraception (9).

Conclusion

Among women with family planning needs in Kodjokro, there was low contraceptive use. Contraceptive practice varied according to several factors including the discussion with the partner and his occupation. This low uptake raises questions about the effectiveness of family planning programs. Therefore, it is necessary for family planning programs to redirect and intensify awareness of all contraceptive methods for couples (and not just women) in rural communities.

Conflicts of interest

The authors have reported no conflict of interest.

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