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Research Article

FEMALE USE OF ARTIFICIAL CONTRACEPTIVE METHODS IN MBUJI-MAYI: PREVALENCE AND SOME DETERMINANTS

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ABSTRACT

Objective: To contribute to the improvement of the rate of use of artificial contraceptive methods in order to reduce the frequency of voluntary interruptions in pregnancies and, consequently, maternal mortality in Kasai Oriental

Methodology: This is a cross-sectional analytical descriptive study carried out in Mbuji-Mayi, Kasaï-Oriental province in the Democratic Republic of Congo. It was carried out from June 29, 2016 to March 5, 2017 or nine months in couples with women at the childbearing age. The study involved 226 women.

Results: Utilization rate of artificial contraceptive methods in East Kasai is 20.8% and non-use 79.2%. The majority was 25 to 29 years old 32.3%, multipares 35.4%, monogamous 66.8%, wishing 5 children or more in 43.8% and Catholic religion 33.2%. The determinants of non-use are: the desire to have other children ORa = 11.6[2.3-40.8], the desire to have ≥ 5 children ORa = 7.2 [2.2 - 23.8], lack of employment or profitable activity ORa = 3.7 [1.2 - 12.0], lack of education and ORa = 12.9 [2.7 - 63.5], the lack of dialogue with partner ORa = 9,6 [2,2 - 42,5], the disapproval by the spouse ORa = 9,7[2,9-32,8], the standard of living low ORa = 27, 1 [4.5 - 162] and average ORa = 9,3 [2.8 - 39.9].

Conclusion: The non-acceptability and non-use of artificial contraceptives remain very common. The explanatory factors in light of our investigations in Kasaï-Oriental are now known.

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INTRODUCTION

Contraceptive methods are methods that allow the couple to avoid pregnancy during intercourse during a given period. [1]. They thus allow a good regulation of fertility with its positive consequences such as socio-economic balance and good family health. However, the non-use of these methods contributes to the occurrence of unwanted pregnancies, factors favoring voluntary interruptions of pregnancy as well as maternal mortality. The contraceptive prevalence rate is very varied around the world.

In Latin America, 66% of women of reproductive age used contraception in 2012. Sterilization and oral contraceptives are the most common methods [2]. In France, a study conducted in 2010 revealed that 50% of women at childbearing age use pills [3]. In Africa, the use of contraceptive methods is generally

low. This is the case in Senegal or despite the launch of a national family planning program in 1991 and despite efforts made, the level of contraceptive practice remains low. Modern contraceptive prevalence is 8.1% for all married women, with a very strong variation between urban areas (19.3%) and rural areas (2.1%) [4]. The lowest rates in South Sudan are 4% and 5% in Chad. While in Burundi in 2010 the utilization rate was 22% and in 2011, this rate was 23% in Cameroon [1.5].

In the Democratic Republic of Congo, the three surveys conducted in 2007, then in 2013 and 2014 on the use of contraceptive methods reported that only 20% of women aged 15-49 in marriage union currently use a method of contraception. any contraceptive method (modern method or traditional method): 7% use a modern method and 13% a traditional method [6,7].

In Lubumbashi (DRC), Matungulu found a prevalence of 27.6% of contraceptive use in 2015 [8].

In Kasaï-Oriental (DRC), a study conducted in Mbuji-Mayi from 2008 to 2013 found a low rate of 5.1% [9]. However, the finding on the use of family planning service in our study environment as elsewhere where the rate is low would be related to the behavior of couples in the practice of contraception.

Barriers to using contraceptive methods are a reality in town and in our villages. Resistance to adopting family planning practice is justified for a variety of reasons, including respect for customary values and certain beliefs dictated by churches to followers [10]. Poverty is a barrier to fertility decline, with the poorest women having more children, marrying younger and using less modern contraception [11].

The desire to have a child and the side effects of contraceptives were mentioned by men and women respectively [12].

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The desire to have a child and the side effects of contraceptives were mentioned by men and women respectively [12].

Contraception is a difficult and less controversial subject, especially among men in a conservative and patriarchal society where they have to say about most issues, including reproductive health decision-making [13].

The participation of men not only contributes to the acceptance of a contraceptive but also to its effective use and continuation [13,14].

Women whose partners are not supportive of the use of family planning and rural women also have unmet needs in family planning. Those who discuss fluently and rarely with their partners are six and three times more likely to chance to use modern contraceptives than those who never argue [15,16,17]. However, during our practice in gynecology-obstetrics, we found that consultations are often motivated by problems of pelvic pain, vaginal discharge, desire for conception and genital hemorrhage. A not insignificant percentage of cases of genital hemorrhage is often due to abortions caused by unwanted pregnancies.

Attempts to voluntarily interrupt pregnancies expose to sometimes life-threatening complications. In a study conducted in Kasai Oriental in 2015 on illegal abortions, Milongu S *et al* found a prevalence of 11.7% with severe anemia as a major complication in 69% of cases [18]. However, another study conducted in 2016 by Mumba A *et al* on maternal mortality in Kasai Oriental found a rate of 192.3 per 100,000 live births with a high disparity in urban and rural areas [19]. In view of the above, contraceptive practice is in this case saving to avoid the worst. The latter helps prevent unwanted pregnancies, space and limit births. Notwithstanding the support of health zones in planning inputs, contraceptive use rates remain low in Kasai Oriental. That being so, we want to know if there are factors explaining non-adherence to contraceptive practice in the population at childbearing age.

This alarming finding as the world is engaged in the fight against maternal and infant mortality raises the following research question: do the desire to have many children and poverty negatively influence contraceptive practice? in Kasai Oriental

General objective

Contribute to improving the rate of use of artificial contraceptive methods in order to reduce the frequency of voluntary interruptions in pregnancies and, consequently, maternal mortality in Mbuji-Mayi.

Specific objectives

Determine the rate of use of artificial contraceptive methods, Determine the profile of non-users of artificial contraceptive methods, Identify the determinants of non-use of artificial contraceptive methods.

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MATERIEL

Population and Study Framework:

This study took place in the ten health zones of the city of Mbuji-Mayi. The study concerned 226 women from couples consisting of a man and a woman of childbearing age, cohabiting under the same roofs using or not artificial contraceptive methods and living Mbuji-Mayi in Kasaï-Oriental in the Democratic Republic of the Congo. Congo during the period of our study. This study was carried out from June 29, 2016 to March 5, 2017 is nine months.

Selection criteria

Inclusion criterion

In this study, any couple of men and women of reproductive age cohabiting under a roof, whether or not using artificial contraceptive methods, living in Mbuji-Mayi town or Lukalaba village during the our study.

Exclusion criterion

Any woman who is in the menopause, who is pregnant, who has had a hysterectomy or a tubal ligation, the children and the one who does not live in Mbuji-Mayi and / or Lukalaba during our investigations.

Sample size

We used the 5.1% prevalence of contraceptive prevalence reported by KADIMA L.C. *et al.*, In a study conducted from 2008 to 2013 in Mbuji-Mayi in Kasai-Oriental [4]. In reference to the open epi-Info statcalc software (estimated non-use prevalence of 94.9%, 95% confidence level, 5% accuracy level), the minimum sample size to which we added the ten percent margin of error is 215 cases. We finally took 226 cases.

Sampling

Systematic probabilistic sampling was used in our survey using random sampling. Thus, randomly selecting the households that met our criteria, was obtained by taking the total number of the population of the whole surveyed area and dividing by the size of our sample which is 226 for the city of Mbuji-Mayi. The quotient we obtained was no probing.

The first household was considered from the middle of the geographical area to be surveyed. By the method of a pen thrown in the air whose tip orientation had been used as a choice of the closest household, considered first and it is in this direction that the selected was oriented. From this one, the

second one was chosen according to the standards of no probing as mentioned above. Whenever we were in a household where the couple did not meet the criteria or did not answer our questions, the one who was close in the same direction and met the criteria was selected using the same procedure.

Data collection

The personal interview based on pre-established survey form is the method used in our to carry out this work. Regarding the economic level, it was defined by the household ownership score of the respondent's household in relation to the Adjusted Poverty Index (API) [8].

Variables studied

Dependent variable; use or non-use of artificial contraceptives

Independent variables: age, type of marriage, seniority in marriage, parity, presence of at least one boy or girl in the family, number of children dying, desire to have more children, number of children desired, tribes, religion, residence, level of education, standard of living and occupation

Intermediate variable: knowledge of contraception, source of information

METHODS

Type of study: This is a cross-sectional descriptive study for analytical purposes

Data analysis: Data entry was performed on the Excel 2007 software and analyzed on SPSS software (Statistic package for Social Science) version 20 and on Epi Info version 7.

In the data analysis, we evaluated the frequency and the mean. The comparison of the mean was made by the Z-test (n> 30). In the analysis of the contingency tables, the probability of Pearson's Chi² test was used to test the equality of two proportions of independent samples.

Logistic regression modes were used. A bivariate analysis identified the variables to be included in the multivariate model.

The threshold of p = 0.05 was set so as not to be too restrictive and not to exclude possible confounders. Thus, successively raw and adjusted ORs were determined and their 95% confidence intervals (95% CI). For all the statistical tests used, the significance level of 95% (α = 0.05) was considered

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Ethical considerations

A previously written authorization was obtained at the Faculty of Medicine and then at the Scientific Ethics Committee of the Official University of Mbuji-Mayi; the latter has been validated by the various medical chiefs of the health zones of the Mbuji-Mayi city in Kasaï - Oriental, our place of study.

All the women and men interviewed agreed and agreed to answer our questions. In order to keep the discretion, we worked under anonymity

Encountered difficulties

During our field visit to Lukalaba village, some household heads once informed of the purpose of our investigation refused to put us in touch with their wives on the pretext that they were stubborn to stop giving birth.—

Confusion bias

- Some questions were not answered because the answers were considered secret. "Ex. number of children desired. However, these cases were counted under the heading of those who chose the will of God,
- The other respondents stated that they had been informed by more than one source of information. To avoid a bias, we used the first source of reported information,
- In some cases of hesitation of the age of the respondents, we asked for identity documents in order to refer to them,
- Regarding the economic level, in many households apparently of a high economic level, household heads refused to answer our questions or some declared themselves non-owners; therefore, we applied a probing step to move to another

RESULTS

Rates of non-use of modern contraceptive methods During the period of our study we surveyed 226 women out of whom 179 did not use modern contraceptive methods, a nonuse rate of 79.2%.

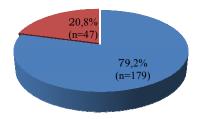


Fig 1 Rate of non-use of CAM

Socio-demographic characteristics of the respondents

Table I Distribution of cases by socio-demographic characteristics

Variables	n =	%	Way ± Sd (Min- Max
Age groups (years)			
15 - 19	33	14,6	
20 - 24	37	16,4	
25 - 29	73	32,3	28,5±6,7 (17-44)
30 - 34	39	17,3	
35 - 39	23	10,2	
40 - 44	21	9,3	
Parity			
0 (Nullipares)	24	10,6	
1 - 2 (Primipares et secondipares)	62	27,4	5,1±1,3 (0-11)
3 - 6 (Multipares)	80	35,4	
≥ 7 (grandes multipares)	60	26,5	
Wedding type			
Monogamous	151	66,8	
Polygamous	75	33,	
age of entry into marriage(years)			
15 - 18	95	42	
≥ 19	131	58	$19,2\pm2,7(15-26)$
Number of children desired			
0 - 4	87	38,5	
≥ 5	99	43,8	
God's will	40	17,7	
Number of children desired			
0	124	54,9	
1 - 5	102	55,1	
Want to have more children		•	
yes	176	22,1	
No	50	77,9	

The majority of women surveyed were aged 25 to 29 (32.3%), multiparous (35.4%), monogamous (66.8%) and 5 or more children (43.8%). However, the average age of the respondents was 28.5 ± 6.7 years and the age of marriage was 19.2 ± 2.7 years.

Socio-cultural and economic characteristics of the respondents

Table II Breakdown of cases by socio-economic characteristics cultural and economic

Variables	n = 226	%
Religious Sects		
Catholics	75	33,2
protestant	64	28,3
Muslim	15	6,6
Branhamists	37	16,4
Other	35	15,5

*		
Level of education		
Uneducated	76	33,6
Primary	35	15,5
Secondary	92	40,7
College / university	23	10,2
Profession		
farmers	3	1,3
shopping	94	41,6
Official	15	6,6
No occupation	114	50,4
Quality of life		
Low	91	40,3
Way	103	45,6
Moderately high	27	11,9
High	5	2,2

^{*} Kimbanguist, apostolic

The non-use of modern contraception was relatively high among Catholic (33.2%), uneducated (33.6%), unemployed (50.4%) and medium socio-economic (45.6%) women. %).

Adjustment of factors associated with non-use of ACM

contraceptive discussion with his partner (ORa = 9.6, 95% CI: 2.2-42.5, p = 0.003) and rare partner talk (ORa = 5.4, 95% CI: 1.2-24.4, p = 0.030), low standard of living (ORa = 27.1, 95% CI: 4.5 - 162, p < 0.001) and average (ORa = 9.3, 95% CI: 2, -39.9, p = 0.003).

DISCUSSION AND COMMENTS

Our discussions and comments will focus on

Rates of use of artificial contraceptive methods

During the period of our study we investigated 226 women, of whom 179 did not use artificial contraceptive methods. This represents a utilization rate of 20.8% and 79.2% of non-use. In the Matungulu series in Lubumbashi, the non-use rate was 72.6% in 2015 [8].

These results are far superior to the 44.8% reported by Noumbissi A. and Wayak M in Cameroon [39] and 39.3% reported by Peer N *et al* in capetown in South Africa [40].

Table VI Determinants of non-use of CAM

Déterminants	No users	Users n=47 (%)	Analysis univariate		Analysis multivariate (logistic regression)	
	n =179 (%)		OR_b [$IC_{95\%}$]	P	OR_a [$IC_{95\%}$]	P
Age(years)						
≥ 28	90 (50,3)	13 (27,7)	2,6 [1,3 - 5,3]	0,0041	1,4 [0,3 - 6,2]	0,665
< 28	89 (49,7)	34 (72,3)	0,4[0,2 - 0,8]			
Age of marriage(years)						
≥ 20	102 (56,9)	13 (27,7)	3 [1,7 - 7,0]	0,0002	1,9 [0,5 - 7,8]	0,358
< 20	77 (43,0)	34 (72,3)	0,3[0,1 - 0,5]			
Desired children						
≥ 5	127 (70,9)	12 (25,5)	7[3,4 - 14,8]	< 0,001	7,2 [2,2-23,8]	0,001
0 - 4	52 (29,1)	35 (74,5)	0,1[0,1-0,3]			
Desire for other children						
yes	153 (85,5)	23 (48,9)	6,1[3,0 - 12,5]	< 0,001	11,6[2,3-40,8]	< 0,001
No	26 (14,5)	24 (51,1)	0,2 [0,1 - 0,3]			
Profession						
No occupation	104 (58,1)	10 (21,3)	5,1[2,4 - 10,]	< 0,001	3,7 [1,2 - 12,0]	0,028
With profession schooling	75 (41,9)	37 (78,7)	0,2 [0,1 - 0,4]			
Uneducated	69 (38,6)	7 (14,9)	3,6 [1,5 - 8,4]	0,0013	12,9[2,7-63,5]	0,002
educated	110 (61,4)	40 (85,1)	0,3 [0,1 - 0,6]		, , , , ,	
Quality of life	, , ,	, , ,				
	83 (46,4)	8 (17,0)	4,2 [1,8 - 9,5]	0,0001	27,1[4,5 - 162]	< 0,001
Low	81 (45,2)	22 (46,8)	0,9 [0,4 - 1,8]	0,4884	9,3 [2,2 - 39,9]	0,003
Way	15 (8,4)	17 (36,2)	0,1 [0,1 - 0,4]	< 0,001	1	,
High average High/			·, [·, ·,]	•		
Attitude of the spouse						
Not favorable	162 (90,5)	20 (42,6)	12,9[5,9-27]	< 0,001	9,7[2,9 - 32,8]	<0,001
Favorable	17 (9,5)	27 (57,4)	0.0[0.0 - 0.1]	•		•
Discussion with the spouse	, , ,		, [, ,]			
Never	102 (56,9)	11 (23,4)	4,4 [2,1 - 9,1]	< 0,001	9,6 [2,2 - 42,5]	0,003
Rarely	43 (24,0)	11 (23,4)	1,0 [0,5 - 2,2]	0,5490	5,4 [1,2 - 24,4]	0,030
fluently	34 (18,9)	25 (53,2)	0,2 [0,1 - 0,4]	< 0,001	1	*

After multivariate analysis, the risk factors significantly associated with the non-use of MCA were: the desire to have 5 or more children (ORa = 7.2, 95% CI: 2.2-23.8, p = 0.001) the desire to have more children (ORa = 11.6, 95% CI: 2.3-40.8, p < 0.001), the lack of employment (ORa = 3.7, 95% CI: 1, 2-12.0], p = 0.028), lack of education (ORa = 12.9, 95% CI: 2.7-63.5, p = 0.002), disapproval of contraception by the spouse (ORa = 9.7, 95% CI 2.9-32.8, p < 0.001), the absence of the

Sociodemographic and cultural characteristics of the respondents

Age of the respondents

Age is a factor influencing the practice of contraceptive methods, in this study, sexually active respondents were the most represented with 32.3% between 25 and 29 years of age. In the same medium, a study by Kadima LC *et al.* reported a

majority of the 25 to 29 age group (41.6%) while Hamzoui *et al.* in Tunisia reported 35% between 23 and 29 years. In contrast, Nguma *et al.* in Kinshasa reported the prevalence of the 30-34 age group at 32.7% and Ralisata *et al.* in Madagascar had found 28% between 30 to 35 years.

This difference could be explained by the precocity of the first sexual intercourse that occurs at an increasingly low age resulting in intense sexuality, hence the difficulty of choosing a contraceptive.

Profession: Many of our respondents were without a profession 50.4%. Nguma *et al.* in Kinshasa report 71% of women with no profession and Kadima LC. *et al.* 41.3% [9.71].

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Level of education: The level of education therefore has a considerable impact on the use of contraception. In our study, 33.6% of our respondents were uneducated.

In Ethiopia, Alem G et al found that uneducated and unemployed women do not use contraceptives in 68.7% of cases [42].

Parity: As regards the parity in our series, the multipares were 35.4% majority followed by primipares and secondipares with 27.4 Our results remain inferior to those observed by Kone *et al.* in Burkina-Faso or multiparous women accounted for 58% of cases. Ralisata *et al.* in Madagascar, 85.1% of women are multiparous.

Religion In our series, 33.2% of respondents were of the Catholic faith.

With regard to religious beliefs, most of them believe that "our children are not our children". According to these beliefs, parents are only channels through which life is expressed which is only a gift from God [75]. They therefore have no right to interrupt life or to prevent its manifestation.

Marital status: With regard to marital status, our study shows that 66.8% of respondents were monogamous and 33.2% polygamous.

Indeed, previous studies show that people in monogamous unions are more likely to use contraception than polygamous

men, who use contraception less widely [75,77]. 4 Determinants of non-use of artificial contraceptive methods

- Parity: In our series, being primiparous or secondiparous multiplies by 7 the risk of not using artificial contraception ORa = 7.2: [2.2-23.8] whereas Matungulu *et al*, found in Lubumbashi in 2015 ORa = 28, 95% CI [2.1-128, 7].
- This result confirms the observation made by Mustafa G *et al*: "some married adolescent women intend to use contraception only when they finish their family size by having 5-6 children". An Ethiopian study found that 40% of women with parity 1 or 2 do not use contraceptives [79].
- The lack of education presents a risk multiplied by 13, ORa = 12,9 [3,8-112] this odds ratio is far superior to that found by Matungulu in Lubumbashi ORa = 1,87, 95% CI: [1.22 to 2.87].
- In a Chadian study conducted by Lenan S. also found that in 96% of cases, uneducated women do not use contraception (30), however, in Ethiopia, Alem G at al found that uneducated women without work, do not use contraceptives in 68.7% of cases [78].
- From the attitude of spouses, the lack of dialogue about contraception ORa = 9,6 [2,2-42,5] this ratio is very high compared to that of Lubumbashi found by Matungulu: OR = 1. In one study, Genet E found that: "Women whose partners are not supportive of the use of family planning and rural women also have unmet needs in family planning [15]. Those who discuss fluently and / or rarely with their partners are respectively six and three times more likely to use modern contraceptives than those who never
- Lack of financial means (low and average standard of living) ORa = 27.1 [4.5-162] and ORa = 9.3 [2.2-39.9] are factors related to the non-use of Contraceptives corroborate with the result of Alem G *et al* found that the lack of financial means was a factor favoring the non-use of contraceptive methods by women (31). This is also confirmed by the result of Matovu cited by Chiekh A *et al*: "in 52.4% of cases the lack of financial means hampers the use of contraceptives" [65].

Lack of money (21.2%) was the main obstacle to the use of contraceptive methods.

In the Attafi J series, unaffordable price and spousal refusal were the main reasons for no contraception for birth control [66].

CONCLUSION

The non-acceptability and non-use of artificial contraceptive methods remains very common in Kasai Oriental.

The determinants of non-use of contraception in the light of our surveys are: the desire to have five or more children, parity less than or equal to two, lack of education and profession, disapproval of contraception by spouses who, moreover, rarely discuss with their wives about contraceptive methods, the low and average standard of living. However, religious prohibition is an obstacle to contraceptive practice.

To do this, a series of communications for behavioral change is imperative in this

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