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Use of Modern Contraceptive Methods in Family Planning Among Married Women in Guinea

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Abstract: *Introduction*: The use of modern contraceptives by married women remains a challenge in Guinea despite ongoing efforts. The objective of this study was to analyse the factors associated with the use of modern methods of contraception by married women in Guinea. *Methods*: This paper carried out a cross-sectional study with married women aged 19 to 49 in two communes of the Republic of Guinea. Data were collected using a structured questionnaire and analysed using Stata SE 16.1 software. This paper performed univariate and multivariate analyses to identify factors that independently influence contraceptive method use by women. *Results*: This paper interviewed a total of 567 married women living as a couple who agreed to participate in the study. Modern contraceptive prevalence among married women was 20% (112/567). The average age of women was 37, 3±4.6. The women had discussed family planning (71.1%) for birth spacing (86.6%). Factors significantly associated with the use of modern contraceptive methods ($p<0.05$) were urban residence (OR: 4,094; 1,990-8,880); the profession of wives (OR: 2,094; 1,126 -3,893); supply to the private sector (OR: 6,210; 3,010-12,810); information received from medical staff (OR: 3.512377; 0.139-0.885) and from television (OR: 1921224; 0.069-0.533); desire for pregnancy (OR: 1486705. 0.0711-0.309); couple discussion (OR: 1691515; 0.080 -355); and spousal approval (OR: 17.78085; 8.530- 37.062). *Conclusion*: the non-use of modern contraceptive methods was associated with urban residence, self-employment of wives, supply in the private sector, information, husband's agreement in our study. The implementation of individual and collective health promotion measures would mitigate their impact.

Keywords: Modern Contraceptive Methods, Married Women, Guinea

1. Introduction

Family planning (FP) is a primary strategy for controlling population growth and promoting maternal and child health through adequate birth spacing and avoiding unwanted pregnancies [1]. There is an inverse correlation between maternal mortality and contraceptive prevalence: countries with high rates have lower maternal mortality rates (MM Rs). [2]. The importance of a relationship between FP and women's quality of life is scientifically proven because FP can improve the lives of women and couples in general, particularly about birth control, the possibility of accessing gainful employment and better living conditions [3].

The prevalence of modern contraceptive use is estimated at nearly 31% in, India; still in younger age groups with smaller family sizes [4]. The prevalence varies from region to region; it is estimated at 7% in Tunisia in North Africa, 16% in Southern Africa and 46.6% in Cameroon in Central Africa [5, 6]. In West Africa, data indicate a prevalence varying between 9.1% and 11.4% in Nigeria; 8.6% in Benin; 20% in

Burkina Faso among all women of childbearing age and 24% among married women [7, 8]. Guinea hardly escapes this situation, where a quarter of women in union (24%) have unmet needs in terms of family planning: 17% for spacing and 7% for birth control. The country has a legal and institutional framework, Law L 010/2000 [9], to improve the populations' access to Reproductive Health (RH), in particular FP, which is one of the health strategies of known importance in reducing maternal morbidity and mortality [10]. Data from the Demographic and Health Surveys (DHS) show that the use of modern contraception by married women fell from 4% in 1999 to 11% in 2018, with a maternal mortality rate of 550 per 100,000 births alive in 2016 [11–14]. However, modern contraceptive methods use prevalence is growing but remains insufficient compared to sub-regional and global trends. This study aims to analyse the factors associated with modern contraceptive methods use among married women in Guinea to enable decision-making to improve this indicator.

2. Methods

2.1. Setting and Type of Study

From August 1, 2018, to January 31, 2019, we realised a cross-sectional study including women aged 15 to 49 who live in Matoto (Conakry) and Wonkinfong (Coyah) and who freely consented to participate in the study.

2.2. Study Population

We included all women of childbearing aged 15-49, residents of the urban communes of Matoto and rural of Wonkifong (Coyah prefecture) who agreed to take our questionnaire. Infertile women and those who did not consent to participate in our post-sensitisation were excluded from our study.

2.3. Data Collection

Open interviews of women carried out data collection through questionnaires established for this purpose. The data collected has been verified entered. The data collected mainly focused on sociodemographic characteristics (Age, Profession, Level of education), Number of living children, Ideal number of children, Religion, Exposure to the media or FP messenger, Source of FP supply, Spouse's attitude towards FP, discussion about FP, Use of planning and reasons for not using.

2.4. Sampling Technique

The sample size was calculated from openepi (n=[DEFF * Np (1-p)] / [(d2 / Z21-α / 2 * (N1) + p * (1-p)]) taking into account a prevalence of the use of modern contraceptive methods of 11% at the national level (DHS 2018), the absolute precision of 2.5% and a cluster effect is 1. These parameters allowed us to find a sample, a maximum of 583 patients to be investigated.

2.5. Data Analysis

The data collected was entered into a database designed using Excel software, exported into Stata SE 16.1 software. Modern contraceptive prevalence referred to women who used modern contraceptives. First, we carried out a descriptive analysis of the data by crossing with the variable of interest (modern contraceptive methods) the factors associated with them. The groups were compared using a Pearson χ^2 test or the exact Fischer test (theoretical size less than 5). Secondly, we carried out a differential statistic through unvaried and multivariate logistic regressions to identify the related factors, odds ratio (OR), confidence interval, and p-value.

2.6. Ethics

Before carrying out the survey, prior approval was obtained from the Faculty's institutional scientific committee through the number 498/CGO/2019. All of the women had freely consented to participate in the survey, and the data was completely anonymous.

3. Results

In total, 567 married women with an average age of 37±5 years were interviewed during this survey. More than a third of them were 25-29 years old (36%, n=206), and almost a third were 30-34 years old (32%, n=182). More than one in two women (54.7%, n=310) were self-employed, while 38.3% (n=219) did not have a job and only 6.9% (n=39) worked in a public company, private or in the public service. Sixty-nine percent of these women had no education (69.3%, n=253); while 13.2% (n=112) had a secondary level and above 9.7% (n=174). Seventy-two percent (72%; n=409) and their spouses were of a Muslim denomination while 23% (n=138) of a Christian denomination. Fifty-three percent (n=300) had 3 children and forty-three and a half (n=247) had four and only three and a half (n=20) had only one to two children. Almost half of these women (47, 6%; n=270) ideally wanted six or more children, while more than a third wanted five (34%; n=193) or four for almost a fifth (18%; n=104). They obtained more from the public sector (42.5%; n=239) than from the private sector (40.6%; n=300). The ideal number of children was 6 or more children (forty-eight percent (47.6%; n=270) or 5 children (34.0%; n=193). At the time of the survey, they had mainly 3 children (52.9%; n=300) and 4 children (43.5%; n=247). n=270) or 5 children (34.0%; n=193). At the time of the survey, they mainly had 3 children (52.9%; n=300) and 4 children (43.5%; n=247). n=270) or 5 children (34.0%; n=193). At the time of the survey, they mainly had 3 children (52.9%; n=300) and 4 children (43.5%; n=247).

Twenty per cent (n=112) of the women used modern methods of contraception. Seventy-nine and a half per cent (79.5%; n=451) had received information about modern methods from their friends, while more than a fifth (22.8%;

129) and a fifth (20%; n=112) had received it reciprocally on radio and television. Most women (85.0%; n=482) were informed about their side effects. The household discussion was effective in more than three quarters (77.1%; n=437). Eighty-seven percent (86.6%; n=591) opted for birth spacing while 12.9% (73) were for birth limitation. Half of the decisions were approved by husbands (50.4%; n=286) and that of abandoning contraception for a desire to become pregnant.

To select factors associated with the use of modern family planning methods, we performed a univariate analysis (Table 1) through which we established our multivariate model. Several variables, including residence, drug supply, etc., were statistically associated ($P<0.05$) with the use of modern contraceptive methods, unvaried analysis, religion, etc. Multivariate analysis (Table 3) showed that the use of modern contraceptive methods was statistically linked to urban residence (ORa=4.204; 95% CI [1.990-8.880]), self-employment of wives (ORa=2.094; 95% CI [1.126 -3.893]), private sector procurement (ORa=6.210; 95% CI [3.010-3.893]), news on television (ORa: 1921224; 05% CI [0.069-0.533]), by medical staff (OR: 3.512; 0.139-0.885).

Table 1. *Sociodemographic characteristics of women using modern family planning methods.*

Characteristics	Workforce	Percentage%
Age (ET)		
Wife age group		
19 - 24	83	14.6
25 - 29	206	36.3
30 - 34	182	32.1
35 and over	96	16.9
Residence area		
Urban	295	52.03
Rural	272	47.97
Profession		
Self-employment	310	54.67
Does not work	218	38.45
Employee	39	6.88
Profession wife		
Self-employment	310	54.7
No	219	38.4
Employee	39	6.9
Sectors		
Private sector		
No	337	59.44
Yes	230	40.56
Public sector		
No	328	57.85
Yes	239	42.15
Instruction level		
No	253	69.3
Primary	28	7.6
Secondary	112	13.2
Superior	174	9.7
Religion		
Christians	409	72.1
Muslims	138	23.0
Others	22	3.8
Number of children		
1 - 2 children	20	3.5
3 children	300	52.9
4 children	247	43.5
The ideal number of children		
4 children	104	18.3
5 children	193	34.0
6 and more children	270	47.6

Tables 2. *Characteristics on the use of modern contraceptive methods.*

Characteristics	Workforce	Percentage%
Types of contraception		
Modern Methods		
Yes	112	19.8
No	455	80.8
Information channel		
Television		
Yes	112	19.8
No	455	80.2
Radio		
Yes	129	77.2
No	438	22.8
Other Sources		
Friends	451	79.5
Talks	77	13.6
Knowledge	39	6.8
Birth spacing		
Yes	591	86.6
No	76	13.4
Birth control		
Yes	73	12.9
No	494	87.1
Information on side effects		
Yes	482	85.0
No	85	15.0
Discussions with spouse		
Yes	437	77.1
No	130	22.9
Desire for pregnancy		
Yes	285	50.3
No	282	49.7
Spouse's attitudes to family planning		
Approved	286	50.4
Disapproved	281	49.6

Table 3. *Analysis of sociodemographic characteristics associated with the use of modern contraceptive methods.*

Characteristics	No Contraception Modern N=(%)	Contraception Modern N=(%)	P-value
Age (ET)			
Wife age group			0.454
19 - 24	12 (14.5%)	71 (85.5%)	
25 - 29	46 (22.3%)	160 (77.7%)	
30 - 34	37 (20.3%)	145 (79.7%)	
35 and over	17 (17.7%)	79 (82.3%)	
Residence area			0.000
Rural area	80 (29%)	192 (70.2%)	
Urban area	32 (10.8%)	262 (89.2%)	
Profession wife			0.030
Self-employment	254 (81.9%)	56 (18.1%)	
Unemployed	165 (75.7%)	53 (24.3%)	
Employee	36 (92.3%)	3 (7.7%)	
Sectors			
Private sector			0.000
No	97 (29.3%)	234 (70.7%)	
Yes	15 (6.4%)	221 (3.6%)	
Public sector			0.000
No	98 (29.3%)	237 (70.7%)	
Yes	14 (6.0%)	218 (94.0%)	

Characteristics	No Contraception Modern N=(%)	Contraception Modern N=(%)	P-value
Instruction level			0.015
No	65 (25.7%)	188 (74.3%)	
Primary	3 (10.7%)	25 (89.3%)	
Secondary	17 (15.2%)	95 (84.8%)	
Superior	27 (15.5%)	147 (84.5%)	
Religion			
Christians	18 (13.2%)	118 (86.8%)	
Muslims	92 (22.5%)	317 (77.5%)	0.028
Others	2 (9.1%)	20 (90.9%)	
Number of children			
1-2	29 (20.1%)	115 (79.9%)	
3	33 (18.8%)	143 (81.3%)	0.922
4 and more	50 (20.2%)	197 (79.5%)	
Ideal numbers for children			
4	20 (19.2%)	84 (80.8%)	
5	37 (19.2%)	156 (80.8%)	0.940
6 and more	55 (20.4%)	215 (79.6%)	
Modern Methods			
No	6 (4.4%)	129 (95.6%)	
Yes	106 (24.5%)	326 (75.5%)	0.000
Information channel			
Medical staff			
No	72 (20.2%)	282 (79.7%)	0.651
Yes	40 (18.2%)	173 (81.2%)	0.009
Television			
No	80 (17.6%)	375 (82.4%)	
Yes	32 (28.6%)	80 (71.4%)	0.526
Radio			
No	84 (19.2%)	354 (80.8%)	
Yes	28 (21.7%)	101 (78.3%)	0.163
Other Sources			
Friends	7 (9.1%)	70 (90.9%)	0.005
Talks	3 (9.4%)	29 (90.6%)	
Knowledge	0 (00.0%)	1 (100.0%)	
Birth spacing			
No	6 (7.9%)	70 (91.1%)	
Yes	106 (21.9%)	385 (78.4%)	0.001
Birth control			
No	108 (21.9%)	386 (78.1%)	0.597
Yes	4 (5.5%)	69 (94.5%)	
Information on side effects			
No	15 (17.6%)	70 (82.4%)	
Yes	97 (20.1%)	395 (79.9%)	0.094
Discussions with spouse			
No	19 (14.6%)	111 (85.4%)	
Yes	93 (21.3%)	344 (78.4%)	0.000
Desire for pregnancy			
No	21 (7.4%)	261 (92.6%)	
Yes	91 (31.9%)	194 (68.1%)	0.000
Spouse's attitudes to family planning			
Approved	15 (5.2%)	271 (94.8%)	0.146
Disapproved	96 (35.0%)	178 (65.0%)	
Conception under contraception			
No	105 (20.5%)	416 (79.5%)	
Yes	5 (11.4%)	39 (88.6%)	

Tables 4. *Factors associated with the use of modern contraceptive methods.*

Variables	Odds Ratio	95% confidence interval	p-value
Wife age group			
19 - 24	Ref		
25 - 29	0.881	[0.286-2.707]	0.826
30 - 34	0.940	[0.262-3.363]	0.925
35 and over	1,183	[0.279 - 5.012]	0.819
Residence			0.000
1. Urban	4.204	[1.990-8.880]	
2. Rural	Ref	[0.504-121.085]	
Number of children			0.141
1-2	7.819	[0.581-2706]	
3	Ref		
4 and more	1,254	[0.279-1.864]	0.564
Ideal numbers for children			
4	0.722	[0.553-2.243]	0.502
5	1.113		0.763
6 and more	Ref		
Profession wife		[0.236-4.889]	0.926
Self-employment	2,094	[3,010-12,810]	0.000
No	1,074		
Employee	Ref		
Private sector			
No	Ref	[0.234 -6.604]	0.797
Yes	6,210		
Instruction level			
No	Ref		
Primary	1,244	[0.509-2.856]	0.670
Secondary	1.205	[0.453-3.581]	0.645
Superior	1.275		
Religion			0.400
Muslims	Ref		0.122
Christians	1,435	[0.618 -3.331]	
Others	5,049	[0.646-39.418]	
Medical staff			0.027
No	Ref		
Yes	3512377	[0.139 -0.885]	
Radio			0.080
No	Ref		
Yes	4082988	[0.149-1.112]	
Television			0.002
No	Ref		
Yes	1921224	[0.069-0.533]	
Birth spacing			0.435
No	Ref		
Yes	3.341246	[0.161-69.114]	
Pregnancy desire			0.000
No	Ref		
Yes	1486705	[0.071-0.309]	
Birth limitation			0.665
No	Ref		
Yes	2.038641	[0.081-51.072]	
Joint discussions			0.000
No	Ref		
Yes	1691515	[0.080 -355]	0.000
Spouse attitudes			
Approved	17.78085	[8.530- 37.062]	0.400
Disapproved	Ref	[0.618 -3.331]	0.122

4. Discussion

The prevalence of the use of modern methods of contraception by married women, observed in the communes of Matoto and Wankinfong, remains above the Guinean national average of 11% in 2018 [13]. For Kantoroya V et al., The prevalence of modern contraceptive methods among women of childbearing age increased globally between 2000 and 2019, by 2.1 percentage points, from 55.0% [95% CI: 53, 76% -56.3%] to 0 57.1% [95% CI: 54.5% -59.5%]. The

slowness of this increase is explained, among other things, by the limited choice of methods; limited access to services, especially for young people, the poorest populations and unmarried people; fear or experience of side effects; cultural or religious barriers; the poor quality of the services available; biased opinions of users and providers against certain methods; and gender-related barriers in accessing services.

This prevalence is higher than the 9.1 to 11.4% [15] reported to Nigeria, identical among all women of childbearing age but below 24% among married women in Burkina Faso [16].

The women interviewed had an average age of 37, 3±4.6 with extremes of 19-41 years for women and 29.3±4.9 years without education for the majority of them. This low prevalence would be linked to many obstacles faced by women of an age to use modern contraceptive methods, including the involvement of men. We believe that the interview of women in the presence of their spouses on the use of modern contraception in family planning constitutes a bias that can negatively influence the prevalence in our study. The majority of women discussed family planning (77.1%) for birth spacing (86.6%). In Kawama (DRC), 55.5% of women perceive FP as a means of birth spacing [17]. For Shukuru SF [18], FP is a means that helps women space births and protect the health of children. The women surveyed belong to one of the two major religious denominations dominated by Islam can be a barrier to contraception. In Burkina Faso, most of the participants were women with no level of education (76.23%) and of Muslim religion (63.93%) [19]. However, in their very great majority, the women's information by their friends did not increase the use of modern methods of contraception. The fear of side effects of contraceptive products can also be an obstacle to using these modern methods in more than 85% of the women surveyed informed.

Our study highlighted several factors associated with modern family planning methods, including the employed profession of wives, urban residence; procurement in the private sector; information by medical personnel and television; the desire for pregnancy, the couple's discussion and the spouse's approval. Our results are similar to those reported by several studies that reported light; desire for pregnancy, previous use of a contraceptive method; living conditions, residence, and level of education and accessible health care as factors associated with the use of modern contraceptive methods. However, another study [20] carried out in an African context found that attitude and parity are associated with modern contraceptive methods.

5. Conclusion

Our study evaluated the uses of modern methods in urban and rural areas in Guinea. The prevalence in our context is 20% and is mainly associated with certain factors, including the salaried occupation of the wives, urban residence, supply in the private sector, information by medical personnel, television viewing, the desire of additional pregnancy, couple discussion and spouse approval. Qualitative studies would be needed to understand better the reasons for this low prevalence of modern contraceptive use or the unmet need for family planning.

Abbreviations

WHO: World Health Organization.
DRC: Democratic Republic of CONGO
DHS: Demographic and health survey
PF: medical planning
MMR: Maternal mortality rate

Statements

The authors declare no conflict of interest.

Authors' Contribution

Camara MK designed the study project, wrote and submitted the article; Loua C conducted the investigation; Kouyaté S and Magassouba M supervised the investigation. Sandouno MR analyzed the database; Magassouba AS read and corrected the draft of the article. All the authors contributed to the writing and critical proofreading of the manuscript.

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