

Factors Associated with Unmet Need for Family Planning among Couples Living in Urban and Rural Areas of Guinea in 2019

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Abstract

Introduction: Unmet need for family planning (UNFP) is defined as women with unmet needs who want to stop or delay childbearing but are not using any method of contraception. The objective of this study was to analyze the factors associated with unmet needs for family planning among couples living in rural and urban areas of Guinea in 2019. **Methodology:** This was a prospective, analytical cross-sectional, multicenter study of a six-month period from August 1, 2018 to January 31, 2019, focusing on couples with unmet needs for family planning. **Result:** Among 189 couples interviewed, 567 had UNFP (33.3%), the reasons for not using modern contraceptive methods were desire for pregnancy (AOR = 2.74, 95% CI: 1.74, 4.31), husband's refusal (AOR = 0.23, 95% CI: 0.06, 0.81), spousal attitude (AOR = 0.20, 95% CI: 0.130, 30), birth spacing (AOR = 2.10% to 95%: 1.16, 3.82), difficulty with a new pregnancy (AOR = 0.17, 95% CI: 0.04, 0.74), and spousal attitude (AOR = 0.20, 95% CI: 0.14, 0.30). **Conclusion:** The involvement of spouses, especially in rural communities, would help achieve family planning objectives and reduce unmet needs for family planning.

Keywords

Associated Factors, Unmet Need, Family Planning, Couple, Rural, Urban, Guinea, 2019

1. Introduction

Unmet need (UN) for family planning is defined as the proportion of sexually active and fertile couples who do not have more children or who wish to delay

the next childbirth but do not receive any modern contraception method [1] [2].

Family planning is the set of means that contribute to birth control with the aim of allowing couples to choose when to have a child, while promoting the continuation of harmonious sexual activity; it is also a primary strategy for controlling population growth and promoting maternal and child health by adequately spacing births and avoiding unwanted pregnancies [3] [4].

In developing countries, particularly in Sub-Saharan Africa, access to quality maternal health services is generally low, and has significant negative implications such as high maternal morbidity and mortality ranging from 196 to 254/100,000 live births. Unwanted pregnancies lead to induced abortion which represents 30% to 40% of maternal deaths [5].

Approximately 215 million couples worldwide are experiencing a family planning unmet need [6]. Its prevalence was reported as ranging from 15% to 58% in developing countries [7] [8].

In West Africa, the proportion of unmet needs for FP varies between 9.1% and 11.4% in Nigeria [9], 8.6% in Benin [10], and 24% in Burkina Faso [11]. It is far less, in Senegal, it is around 41% [12]; in Côte d'Ivoire, it varies between 50.7% and 57% [13]; in Mali, it is 31.3% [14].

The prevalence of unmet needs in Guinea reveals that 24% of couples in the union have unmet needs for family planning: 17% for spacing and 7% for limiting births [15]. For family planning in countries around Guinea, the proportion of total family planning demand met has changed little since 2012, from 29% to 33%. In the same time period, the percentage of couples with met needs increased from 6% to 11%. In contrast, the percentage of couples with unmet needs for family planning changed little (24% in 2012 vs. 22% in 2018) [16].

The level of modern contraceptive prevalence remains relatively low despite the implementation of all family planning-related programs, the unmet need for family planning still remains high nearly one in nine couples expressed a need for it. Little is known about explicative factors for UMN for FP in Guinea. Our study was meant to identify factors associated with unmet needs for family planning among couples in the union in rural and urban areas of Guinea in 2019.

2. Design

This was a cross-sectional analytic study.

2.1. Study Setting

This study took place in rural commune of Wonkifong (Coyah) and the urban commune of Matoto (Conakry). Wonkifong is a sub-prefecture of the rural commune of Coyah, located at seven kilometers from the capital of the commune of Coyah, in the health region of Kindia. This commune is 50 km from the capital Conakry.

Matoto: This is one of the five communes of the capital Conakry, which has thirty-seven districts within it (**Figure 1**).

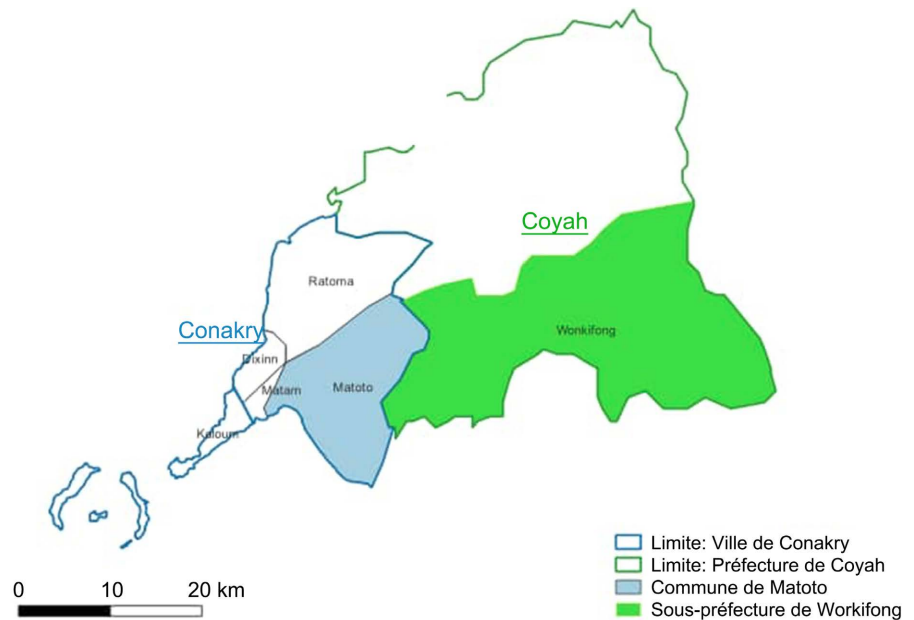


Figure 1. Study website.

I.e. a duration of 12 months data was collected during a six months period (1st August 2018 to 31 January 2019).

2.2. Target Population

All couples of childbearing age, residing in the urban commune of Matoto (Conakry) and the rural commune of Wonkifong (Coyah prefecture).

2.3. Study Population

Couples of reproductive age in the rural commune of Wonkifong (Coyah prefecture) and that of the urban commune of Matoto (Conakry) expressed an unmet need for family planning.

2.4. Sampling Procedure

Sample size

The size of our sample was calculated using the Schwartz formula [17].

$$N = P(1 - P) \frac{(Z\alpha/2)^2}{d^2}$$

N = minimum sample size;

$Z\alpha$ = constant: 1.96;

P = prevalence of the phenomenon.

The percentage of couples in union with unmet needs in urban communes is 26% (0.26) compared to 23% (0.23) in rural communes among couples in union, according to DHS 2012 [15].

$Q = 1 - P$ = constant related to the phenomenon;

i = desired precision 5% (0.05).

The sample size in rural commune is:

$$N2 = (1.96^2 \times 0.23(1 - 0.23)) / 0.05^2 = 272$$

The sample size in the urban commune is:

$$N1 = (1.96^2 \times 0.26(1 - 0.26)) / 0.05^2 = 295$$

The total sample is therefore: $N1 + N2 = 295 + 272 = 567$ couples.

2.5. Sampling

We proceeded with a five stage cluster sampling (**Figure 2**).

The number of concessions to be surveyed in each locality was defined in proportion to the population in the locality in relation to the total population of couples of childbearing age (proportionate sampling).

In the commune of Matoto, the female population was 374,428 inhabitants, the total number of couples to be surveyed was 295, and for this population a sample of 148 concessions was required; in the rural commune of Wonkifong, the population was 6500 inhabitants [15], the total number of couples to be surveyed was 272, and a sample of 136 concessions was required.

The number of concessions to be surveyed was distributed in proportion to the population of couples in each commune.

In each concession, a list of couples of childbearing age who met the inclusion criteria was drawn up, from which two couples were chosen at random and interviewed. Then we identified the public square where the local assemblies were held and randomly selected a direction. After numbering all the concessions in the chosen direction, the first concession to be surveyed was randomly chosen.

The next concession was the closest to the last one to be surveyed. If the number of couples in unmet needs was not reached, another direction was randomly chosen and the process was carried out as above.

Non-respondents, *i.e.* couples who refused to answer the questionnaires, were replaced by other couples in the same or another direction.

2.6. Selection Criteria

1) Inclusion criteria

Couples of childbearing age in union, residing in one of the two communes who freely consented to participate in the study.

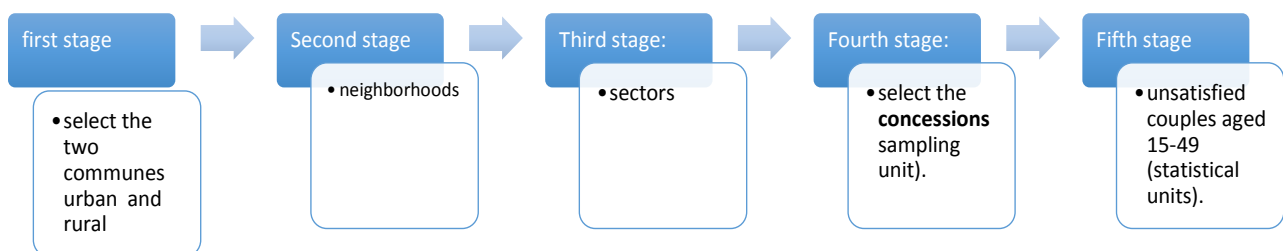


Figure 2. Sampling.

2) **Were not included** in the study, couples of childbearing age with infertility single, menopausal and those who refused to participate.

2.7. Study Variables

1) **Quantitative variables were** prevalence, age of the couple, and ideal number of children.

2) **Qualitative variables were** reasons for non-use, spouse's refusal, public source of FP products, partners' attitudes, birth spacing, difficulties in managing another pregnancy, occupation.

Collection procedure: A standardized questionnaire, taking into account the different variables, was administered to the couple presenting the unmet needs.

2.8. Data Analysis

The collected data were entered using Epi info 7.2.0.1 software, then exported to an Excel spreadsheet for processing and analysis using Stata SE version 15 software.

The first step is a description of the different quantitative and qualitative variables collected in terms of position parameters (mean, frequency) and dispersion parameters (standard deviation, odds ratio, and mean median).

- The second step consisted of univariate and multivariate analysis.

The Chi-square test was used to compare two proportions. It was significant when p was less than 0.05.

- Variables with a p -value of less than 0.2 in the bivariate analysis were retained for logistic regression modeling to determine factors related to unmet needs among couples.

3. Results

Text 1: The overall prevalence of unmet needs was 33.3% (189/567) and 66.7% (378/567) among couples living in rural and urban areas respectively (**Figure 3**).

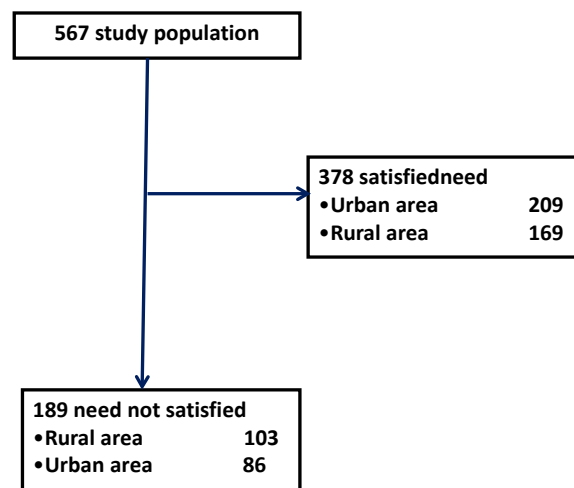


Figure 3. Flowchart.

Text 2: The most represented age group of spouses was 40 - 44 years 34.88% (30/86) in the urban commune, for the rural commune the age group was 35 - 39 years 35.92% (37/103).

Text 3: The level of education of the spouses for the unmet needs was dominated by those with higher education 44.18% (38/86) in the urban commune, in the rural commune, the spouses had no education 68.93% (71/103).

Text 4: The level of education of the wives for the unmet needs in the two communes (rural and urban) was the same for uneducated women respectively (87/103) (48/86).

Text 5: Women's occupation, in urban areas (51/173) of the women are self-employed, in rural areas (53/137) also exercise the same functions on the other hand (48/130) do not exercise any job in rural areas against (27/88) in urban areas for $p = 0.62$ with Fisher exact = 0.80.

Text 6: 5 to 6 children as the ideal number of children desired were (42/154) in the urban commune with the mean of 5.09|Median: 5.00|Standard deviation: 0.84|Extremes: 4 and 7 Student: <0.05, the rural commune it is the same number of children desired 5 to 6 by a large number of women (66/164) Mean: 5.78|Median: 6.00|Standard deviation: 0.95|Extremes: 4 and 8 Student: <0.05.

4. Discussion

Prevalence of unmet needs for family planning

The overall prevalence of unmet needs for family planning observed in our study (**Text 1**) was 33.3% (189), while met need represented 66.7% (378). This prevalence is higher than the national norm of 24% [16], but lower than that reported in Mali 31.3%, Senegal 41% and Côte d'Ivoire; 57% [12].

The prevalence of unmet needs reported by commune of residence (**Table 1**) shows that the prevalence remains higher in the rural commune (38%) than in the urban commune (29%) with a statistically significant difference $p = 0.032$. This dissatisfaction could be reflected in the existence of barriers to accessing reproductive health services. These obstacles may be inherent to a poor understanding of the concept of FP by couples, to socio-cultural factors, especially in the rural commune, or to the organization of FP services.

The finding in our series is similar to that reported by Prasad *et al.* [18] in southern Sudan, which was 32.1%; this similarity may be due to the comparability of the study design and population. Our values are higher than those reported in Nigeria and Guinea, respectively, by 16% and 22% [5] [16] [19]. This difference could be due to the different aspects of socio-cultural practice. On the other hand, they are lower than those carried out [7] [13] in south central Ethiopia 52%. This difference can be explained by the way the study population was selected and government involvement in solving maternal health problems.

The main unmet needs (**Table 2**) for modern FP methods, were birth spacing and birth limitation in our study; the reasons for choice were more directed towards spacing in 30.7% than birth limitation (2.6%); higher in rural township

Table 1. Unmet needs for family planning by commune of residence.

Need in PF*/Area	Effectif	%	Confidence Interval 95%	
			Lower Limit**	Upper Limit***
Rural Area				
Unmet Need	86	29.2	23.7	34.6
Need Met	209	70.8	65.4	76.3
Total	295	100.0	100.0	100.0
Rural Area				
Unmet Need	103	37.9	32.4	44.1
Need Met	169	62.1	55.9	67.6
Total	272	100.0	100.0	100.0

*Family Planning; **Lower Terminal; ***Upper Terminal; p-value = 0.032.

Table 2. Prevalence of major unmet needs.

Type of Need in Planning	Status of Family Planning Need		Total
	Unmet Need*	Need Met**	
Birth Spacing	174 (30.7)	320 (56.4)	494
Birth Limitation	15 (2.6)	58 (10.2)	73
Total	189	378	567

p-value = 0.016. *Unmet Need; **Need Met.

(37.9%) than urban township (29.2%); the difference was significant for $p=0.016$. This could be explained by the fact that our study population was getting younger and that the desire of couples to have children was more pronounced at younger ages than at older ages. The finding in our series was similar to that conducted in Benin [1]. Our results were contrary to the one carried out in rural Pune in India [5] [7], which showed the unmet needs in birth limitation higher than the unmet needs in birth spacing.

Main reasons for not using modern contraceptive methods (Table 3), the reasons were multiple: the first was the desire for pregnancy (69.9%), this finding corroborates to the result [7] [20], indicating about, 71% of the couples with 4 living children, want to have more children and the desire was even greater in rural communes.

Husband's agreement and/or absence 13% [6] [7] was perceived as a second reason for non-use of modern methods in urban commune and a third in rural commune. These are almost similar to the findings of research done in north-western Tigray, Ethiopia [4] indicating how important spousal support for family planning is as it reveals that women whose spouses had a non-supportive attitude towards contraceptive use were more likely to have an unmet need for planning.

However, fear of side effects (10%) was the most common reaction expressed

Table 3. Les reasons for not using modern contraceptive methods.

Reasons for Non-use	Effectif	%
Urban		
Desire of Pregnancy	59	68.6
Absent Husband	6	7.0
Fear of Side Effects	5	5.8
Health Problem	5	5.8
Wants a More Effective Method	5	5.8
Conception under Contraception	2	2.3
Difficulty of a New Pregnancy	2	2.3
Husband's Refusal	2	2.3
Rural		
Desire for Pregnancy	72	69.9
Conception under Contraception	9	8.7
Absent Husband	7	6.8
Wants a More Effective Method	7	6.8
Fear of Side Effects	5	4.9
Health Problems	2	1.9
Husband's Refusal	1	1.0

by respondents and included weight changes, bleeding [4] [6] [20] and lack of sexual desire. Headaches and blood pressure problems were also cited by a few and conception under contraception (2.3% - 8.7%), differently mentioned in the two communities, were reported in the literature [21] Health problems 7% (5.2 - 1.9). These reasons were the most associated with FP unmet need ($p < 0.05$). In our series, we found a significant difference in the fear of side effects or health problems associated with modern FP methods; the same finding has been reported in Pakistan [22].

Conception under contraception and the difficulties of a new pregnancy found in our study, as an explanation of unmet needs for family planning, are also described [23] in Burkina Faso.

Factors associated with unmet needs

Socio-demographic characteristics

The average age of the wives interviewed in general was 29.22 ± 0.81 years in urban communes and 29.39 ± 0.91 years in rural communes. The 35 - 39 age group (35.92%, 37/103) was the most represented for the unmet needs in the rural commune, while in the urban commune it was the 40 - 44 age group (34.88%, 30/86) (**Text 2**), most of whom were self-employed (67.37%).

Cross analysis between unmet needs and age of couples by commune of residence showed no statistically significant difference in the two communes of residence Wonkifong ($p = 0.37$) and Matoto ($p = 0.30$). These results corroborate

with that reported in Nigeria [1] in 2018 who found no statistically significant difference between unmet needs and age of couples surveyed.

Unmet need for family planning was significant among wives as well as husbands with no education in rural commune (32.8%); and primary (29.3%); unlike in the urban commune where unmet need was more significant among husbands with secondary education in (36.2%) compared to (30.4%) of cases among wives in rural communes (**Texts 3-4**).

These values are higher than those found in Guinea among couples with no education and primary level of education (21% and 24% respectively) [16]. The difference between couples with no education and those with secondary level of education is greater in Cameroon, 34 points compared to 18 and 22 points in Burkina Faso and Côte d'Ivoire, respectively [24].

In both urban and rural communes, the socio-professional category of couples was dominated by self-employment. However, the lack of employment was more marked in rural than in urban areas, no significant difference was found between the SNR in FP, socio-professional status and commune of residence, $p > 0.05$ (**Text 5**).

Unmet need was higher among couples with a number of children ranging from 3 to 4 children (32%). And the majority of couples said they wanted more than 5 children (**Text 6**). In contrast, in Sousse, Tunisia, in 2001 [25], 98% of the couples surveyed on the ideal family size reported the number of two children regardless of gender.

5. Reasons for Non-Use Associated with Unmet Needs

Explanatory factors for unmet needs in family planning

In order to more closely identify the factors that lead to unmet needs, the application of logistic regression followed by univariate and multivariate analysis yielded results presented in **Table 4** and **Table 5**. The adjusted Odds Ratios indicate an association between personal characteristics, reasons for not using and having an unmet need or being a modern method user, after controlling for other factors.

In the univariate analysis, we found a statistically significant association between the commune of residence, difficulty in obtaining a new pregnancy, public source of supply, husband's disapproval, birth spacing, husband's attitude, and fear of side effects in the two communes concerned ($p = 0.05$) (**Table 4**).

In the multivariate analysis (**Table 5**), in the urban commune, desire for pregnancy and husband's disapproval was significantly associated with SNBs, a woman whose partner approved of modern contraception was 0.17 times less likely to have an unmet need than a woman whose husband disapproved ($p = 0.00$). In addition, a lack of agreement on the number of children desired by the couple was 2.52 times more likely to have an unmet need than a woman who discussed the number of children desired with her husband ($p = 0.00$). Both of these factors have been shown by numerous studies to have significant associations with unmet

Table 4. Univariate regression analysis of explanatory factors for unmet needs for family planning by commune.

Variable	Need		IC95%		OR	p-value
	UN*	NM**	Lower Limit	Upper Limit		
Rural Commune						
Attitude of the Husband	1	6	0.10	0.30	0.17	0.00
Difficulty of a New Pregnancy	0	8	0.00	--	0.00	0.99
Source of Product Supply SR	23	80	0.18	0.56	0.32	0.00
Husband's Refusal	86	77	0.03	2.24	0.27	0.22
Desire for Pregnancy	72	75	1.73	4.89	2.91	0.00
Side Effect	5	16	0.17	1.37	0.49	1.17
Birth Spacing	95	149	0.68	3.76	1.59	0.29
Urban Commune						
Attitude of the Husband	2	23	0.15	0.45	0.62	0.00
Difficulty of a New Pregnancy	2	14	0.07	1.49	0.33	0.15
Source of Product Supply SR	32	99	0.39	1.10	0.66	0.11
Husband's Refusal	57	71	0.04	0.84	0.19	0.02
Desire for Pregnancy	59	79	2.11	6.14	3.60	0.00
Side Effect	5	20	0.21	1.61	0.58	0.30
Birth Spacing	79	171	1.07	5.86	2.51	0.03

*UN: Unmet Need; **NM: Need Met.

Table 5. Multivariate regression of explanatory factors for unmet needs for family planning by commune.

Variable	NEED		IC95%		OR	p-value
	UN*	NM**	Lower Limit	Upper Limit		
Rural Commune						
Attitude of the Husband	1	6	0.09	0.32	0.17	0.00
Difficulty of a New Pregnancy	23	80	0.21	0.69	0.38	0.00
Source of Product Supply SR	86	77	0.04	3.31	0.35	0.36
Husband's Refusal	72	75	1.33	4.73	2.51	0.00
Desire for Pregnancy	95	149	0.19	1.70	0.57	0.30
Urban Commune						
Attitude of the Husband	2	23	0.12	0.39	0.22	0.00
Difficulty of a New Pregnancy	32	99	0.40	1.25	0.71	0.24
Source of Product Supply SR	57	71	0.05	1.13	0.23	0.07
Husband's Refusal	59	79	1.10	8.72	3.58	0.00
Desire for Pregnancy	79	171	0.22	1.73	0.62	0.36

*UN: Unmet Need; **NM: Need Met.

needs for family planning. They have been described in Ethiopia, Cameroon and Congo to have a significant protective association with unmet needs for family planning [6] [25] [26]. Therefore, the approval and support of the male counterpart are very important issues to consider when implementing interventions to reduce unmet needs for family planning in rural communes.

In addition to the reasons cited in urban communes, public supply was 0.38 times significantly associated with unmet needs for family planning. This could be explained by the lack of supply of modern contraceptive methods or the very difficult access to some sites in the rural commune. A similar study conducted on the analysis of unmet needs in Senegal [12] showed that lack of access to FP services was 0.38 times more associated with unmet needs; this lack of access was low in several sites in the rural commune compared to the urban commune. Couples who did not have access to modern contraceptive methods were more likely to have unmet needs than to be modern contraceptive users.

Another study conducted [8] in Ethiopia in the Dangila region showed results contrary to our study; occupation and history of family planning counseling by health workers were found to be significantly associated with unmet needs for family planning.

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Conflicts of Interest

Contributing authors do not note any conflict of interest in this work, contributing authors state that they have read and approved the work.

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